

tongariro

THE JOURNAL

2023



CONTENTS

From the President	4	Historic Waihohonu Hut gets full treatment	40
<i>Mike O'Sullivan</i>		<i>Mitchell Black</i>	
Project Tongariro Director's report	6	Oruatua recreation restoration	42
<i>Kiri Te Wano</i>		<i>Shirley Potter</i>	
Moa Under water	10	EPRO - 25 years of controlling predators	46
<i>Harry Keys</i>		<i>Jane Stafford</i>	
Project Tongariro - Conservation model	14	In his own words ... Pat Sheridan - ranger	50
<i>Penny Nelson, DOC Director General</i>		<i>Dave Wakelin</i>	
Rangataua: Battling for our nightlife	16	Kid's Greening Taupō 2023	56
<i>Kryisia Nowak</i>		<i>Rachel Thompson</i>	
Collecting native seedlings	18	Kiwi contact: Empowering environmental education in Taupō district	60
<i>Heidi Pritchard</i>		<i>Heidi Pritchard</i>	
Mahi Aroha 2023	20	Greening Taupō 2023	62
<i>Anna Calvert</i>		<i>Robyn Ellis</i>	
A 'Trainee' ground for success	23	Predator Free Taupō 2023	70
<i>Candace Graham</i>		<i>Robyn Ellis</i>	
Waimarino restoration	25	Wilding conifer management 2021 - 2023	73
<i>Clodagh Costello</i>		<i>Alana Delich and Nicolas Singers</i>	
Greening Taupō day 2023	31	Volcano Watch	76
<i>Rachel Thompson</i>		<i>Harry Keys</i>	
Teen Angst on the Mangatepopo	34		
<i>Kryisia Nowak</i>			
What's up in the south	36		
<i>Karen Grimwade</i>			



www.tongariro.co.nz



Piwakawaka. Photo: Jumpstory

tongariro

THE JOURNAL

Issue #28

PUBLISHER

The Tongariro Journal is published by Project Tongariro. Special thanks to the Department of Conservation for time and resources towards this journal.

EDITORS

Dave Wakelin
Harry Keys

PROOF READING

Margi Keys

CONTRIBUTORS

Anna Calvert
Alana Delich
Mitchell Black
Clodagh Costello
Robyn Ellis
Candace Graham
Karen Grimwade
Harry Keys
Penny Nelson
Kryisia Nowak
Nicolas Singers
Mike O'Sullivan
Shirley Potter
Heidi Pritchard
Jane Stafford
Kiri Te Wano
Rachel Thompson
Dave Wakelin

DESIGN

Tark Communications Ltd
Phone: 021 848355
Email: dave@tark.co.nz

PRINT COPY

Quality Print, Taupō

COVER PHOTO

Shelter from the alpine weather,
Tongariro National Park.
Photo: Kiri Te Wano

BACK COVER

Emerald Lake, Tongariro National Park.
Photo: Adrien Aletti - Unsplash

PHOTOGRAPHY

Unless otherwise stated photos are credited to the article author.

GENERAL ENQUIRIES

Project Tongariro (Tongariro Natural
History Society Inc.)
P.O. Box 238
Turangi
Ph: +64 7 386 6499
Mobile: +64 027 628 8009
Email: info@tongariro.org.nz
Website: www.tongariro.org.nz

ENVIRONMENTAL

In the interest of forest conservation,
we support paperless electronic
publishing.

COPYRIGHT

© Copyright [October 2023],
Project Tongariro

ISSN 1172 1081

All material appearing in tongariro is copyright unless otherwise stated or it may rest with the provider of the supplied material. tongariro takes all care to ensure information is correct at time of printing, but the publishers (Project Tongariro) accept no responsibility or liability for the accuracy of any information contained in the text. Views expressed are not necessarily endorsed by the publisher or editors.



Flying on Lake Taupō *Photo: Jumpstory*

FROM THE PRESIDENT



Damage caused by Cyclone Gabrielle along Wairakei corridor Photo: Robyn Ellis



MIKE O'SULLIVAN

PROJECT TONGARIRO
PRESIDENT

Already 2023 is proving to be the year that the worst effects of climate change were brought into sharp focus by ex-cyclone Gabrielle. This catastrophic weather event highlighted that our current planning and infrastructure is unfit for the challenges ahead and that immediate action is urgently required to ensure that the next generations will have a sustainable future. While here in the Central Plateau we escaped the ravages that destroyed homes and livelihoods in Auckland and our near neighbours in Hawkes Bay, one look at the damage evidenced in the Wairakei corridor and the forests surrounding Turangi is indicative of how serious the situation has become.

At Project Tongariro we are really good at this work; our achievements to date are truly impressive.

I understand how it is very easy to feel overwhelmed and helpless by the challenge of climate change. However, I firmly believe that much can be done



Damage caused by Cyclone Gabrielle along Wairakei corridor Photo: Robyn Ellis

to protect the future of our wonderful country at a local level through the work of organisations such as Project Tongariro. Not only is this work empowering, purposeful and energising, the sense of personal achievement is enormous. While we need government and industry to provide leadership in this area, it is the invaluable work of community organisations such as ours that can do so much to support the biodiversity that is unique to the Tongariro area.

I am inspired by the hundreds of community volunteers that week in, week out give their time to control weeds and pests, restore waterways, plant thousands of native trees, and inspire future generations with their dedication and commitment.

At Project Tongariro we are really good at this work; our achievements to date are truly impressive. One small but not unusual illustration of this occurred on



Oruatua Recreation Reserve community planting day volunteers Mike, Sarah, Helen, Collette and Nick (hiding behind his cuppa). Photo: Anna Calvert

27 June when over 40 volunteers met to plant over 1000 native trees along the Tauranga-Taupō River. It was a beautiful winter's day, the sun was shining, the spirits were up, the catering was delicious and everyone went home that afternoon with a sense that they as a community had done a good thing. Days like these are special but not unusual in the Project Tongariro calendar; a month later another group met to plant even more trees.



Oruatua Recreation Reserve community planting day morning tea. Photo: Anna Calvert

While we cannot let central government off the hook, it is the work of communities that will continue to be key drivers in building a sustainable future for our children. With this in mind, Project Tongariro continues to be a key partner of the Department of Conservation, and together we have developed

significant strategic relationships to achieve our conservation goals for the Tongariro region. These include the important restoration of Rotopounamu and the Te Mātāpuna Wetlands. These conservation projects have benefited not just from DOC resources but technical expertise and personal support. Other invaluable supporters include Bay Trust, Environment Hubs Aotearoa, Len Reynolds Trust, Waikato Catchment Ecological Enhancement Trust, Contact Energy, Waikato Regional Council and Taupō District Council whose support for Greening Taupō and Kids Greening Taupō is key to the success of these community projects.

None of our work would be possible without our Project Tongariro team lead by Kiri Te Wano; her amazing team includes Anna Calvert, Robyn Ellis, Rachel Thompson, Heidi Pritchard, Benoir Midwood-Murray and Clodagh Costello. It is a cliché to say that their work is invaluable, but it is and the impact of their dedication and commitment will be experienced by many generations to come. Thank you to all of you.

And lastly I want to thank our many volunteers. Your work is extraordinary and your commitment to the biodiversity and the ongoing ecological health of this wonderful part of the world is inspiring. Without you, Project Tongariro would not be the best-in-class community conservation operation that it is today. We celebrate your work, your energy and your dedication to your community and salute you for it.

Ngā mihi Mike

PROJECT TONGARIRO DIRECTOR'S REPORT



KIRI TE WANO

PROJECT TONGARIRO
CEO/DIRECTOR

Tēnā koutou

This year has been a year of recognition for our society, and I feel that we have continued to embed our place in the communities we live and work. This can be evidenced by the New Zealand Plant conservation network awards we were recognised with in November 2022. We were very proud that Paul Green (QSM), our former Director and noted conservation advocate was awarded a lifetime achievement award, and our society was awarded the community conservation award.

The level of support our communities continue to show is seen via our amazing group of key volunteers who show up every time we have an event or activity, and this wonderful group of people are continuing to grow. We are continuing to learn about what attracts and how to keep our volunteers happy. Greening Taupō and Kids Greening Taupō continue to grow their amazing supporter base, and this was highlighted by our recent Greening Taupō planting day and environmental festival. Heavy rain did not deter stallholders and over 1500 students, parents and teachers turned up to plant 3000 trees, adding to last year's planting at Crown Park in Taupō.

I have an amazing team of staff and an engaged, passionate and experienced governance group. This means myself and my team are empowered to run our respective programmes, encouraged to take risks and continually grow.

We are now in our second year as a hub for Environment Hubs Aotearoa (EHA) and as with each funding partner, we have different measurements to which we must report on. Not only is EHA supporting



Eager participants build predator traps at Junes Carrot Festival in Ohakune. Clodagh Costello, our Waimarino Restoration Educator in the foreground. Photo: Kiri Te Wano

us with Governance and Tiriti o Waitangi training, inspiring and engaging conferences and monthly managers huis (that are excellent for networking!). The figures and statistics we have committed to report on are growing. You will see this growth in our 'infographics' - the small indicator logos that accompany a set of impressive figures I am very proud of. This is a quick, visual way to demonstrate the impact we are having in our communities and environments we are present in. But to keep the statisticians and figures people happy - there is very real data to back these figures up should you want to dig deeper!!

Volunteer hours, numbers of trees planted, traps and trap lines and social media visits are some of the original tallies we've kept over the years and the numbers dip and rise depending on what projects we are doing, but it always amazes and humbles me the time amassed by those wanting to participate, to care



Rachel Thompson with other PT volunteers working on the rear of Waihohonu Historic Hut. *Photo: Kiri Te Wano*

for and to know our environment. People also are continuing to donate to our various projects, and a cleverly designed 'native tree donation drive' leading up to Christmas for Greening Taupō was well received. I would also say that professional volunteering - people who offer their expertise at a much discounted rate, or even free of charge, is quietly growing. Nick and Alana of Singers Ecological, Kim of Koiro



Checking out fallen pine trees along Wairakei Drive after Cyclone Gabrielle with Robyn. *Photo: Kiri Te Wano*



Ardy finds a Douglas Fir seedling during one of January 2023's Mahi Aroha Wilding pine control seedling pulling day, near Waihaha, Western Bays, Lake Taupō. *Photo: Kiri Te Wano*

Marketing, and Shawn of Quality Print are just a few of the long standing ones.

Some of our challenges this year included the impact of Cyclone Gabrielle on Wairakei Drive, north of Taupō, where our Wairakei Corridor Restoration project is situated, championed by Shawn Vennell of Quality Print. There are many old man pines that got blown over causing some damage to planting sites - but the silver lining being that these weeds have been dealt with! Not to mention the fire-wood-fairies who then tidied up what they could access, and other agencies who have interest in this area.

COVID-19 and the cyclone continue to affect the events community. Entries are still climbing back to previous levels, but the number of those attending in support of competitors (whanau and friends) was noticeably down this summer.

A constant challenge for us - and many not-for-profit community groups - is sustainable funding. This last year has seen the usual 'you win some, you lose some' funding bids, but we are picking up signals that there will be a funding crunch coming up, evidenced by a long-time overheads funder, struggling



Our BBQ setup for February's Ruapehu Trail Festival event, beneath the now closed Chateau. *Photo: Kiri Te Wano*

with low-performing investments and indicating that they might not be able to continue our funding relationship next year. This has been the topic of many conversations around our governance board - and this has rallied us to ensure that we're nimble, focused and ready to 'see the bridge' to new funding opportunities.

We continue to struggle with our long-term forest restoration project at Mt Pihanga - Rotopounamu. There is still a strong local aversion to aerial 1080, and relationships with hapu and iwi over this issue continue to be tense. We are considering returning to using a ground control operation. However disappointingly, we know it is resource-heavy, super expensive and delivers low ecological outcomes. However, we need to attempt to halt the wholesale degradation of the mature forest at Mt Pihanga - Rotopounamu! But, we can only do complementary work alongside DOC - and we cannot do it without a mandate from the community and at the moment, our community is not cohesive nor engaged around Rotopounamu. However hui is beginning again and renewed relationships are being forged. In the meantime our volunteers will continue to check and bait our trapping network of over 300 traps.

My favorite highlight from 2022-2023 is successfully completing our Wilding Conifer control projects. With funding from MPI and the Lotteries fund, we financially managed \$453,500 over the last two

years and managed to control 14,644 trees in three separate project areas! Funds were also given to us from a forestry company who wanted control work completed on their land. This has been achieved through team effort, in no small part to Singers Ecological who project-managed these projects for us and to the landowners who put their faith in us to do what we said we would.

However, work still continues to advocate to Waikato Regional Council and DOC to finish off some remaining outstanding sites with difficult to reach trees, and to maintain the ecological gains we have achieved.

Investment in the National Wilding Conifer Control Programme (NWCCP) has seen a huge boost in funding with \$37 million invested from July 2016 to June 2021. Additional investment was made in the 2020 budget with \$100 million committed over four years to the NWCCP under the Jobs for Nature Programme. This allowed national wilding pine control operations to scale up significantly and make great progress (including our projects). However, the Jobs for Nature funding comes to an end from 2023/24 with ongoing funding being cut to only \$10million per annum to the NWCCP. This will see the significant progress made by regional and unitary councils, community groups, iwi and landholders - put at significant risk. Without sustained funding, we will not only lose our gains, but also the massive public investment. Completing the job ensures that the



Our PT team listening avidly to Hawera from TDC on a historic bike tour on Taupō's lake front, in early February 2023. *Photo: Kiri Te Wano*

funds already invested are not wasted and that the future expenses are much reduced. Not to mention the ecological implications if work is not continued at the same level. The spread of wilding pines is not limited to one region. Everywhere faces the pervasive threat of these invasive trees, putting our iconic landscapes, biodiversity and productive lands at risk. We must advocate to all decision makers to commit to increased funding so we can finish the job.

In conclusion, this is my second year in the Director role (a recent name change is now identifying me as the CEO!) and I now feel 'in the groove'! I have an amazing team of staff and an engaged, passionate and experienced governance group. This means myself and my team are empowered to run our respective programmes, encouraged to take risks and continually grow. Support also comes from our long-term funders such as Bay Trust, Len Reynolds, McCarthy Trust, Taupō District Council, Ministry for the Environment, Ministry of Education and many local businesses who continually support. Without the support of many, we cannot do the job we do - so thank you!

MOA UNDER WATER



HARRY KEYS

EX CONSERVANCY SCIENTIST
PROJECT TONGARIRO
MEMBER

Introduction

In early July 2015 DOC Taupō was notified about an intriguing discovery. Two giant bird footprints had been found embedded in rock in about a metre of water in southern Lake Taupō. The discoverers, Kevren Ford and Nina Booth, had found the prints while snorkelling in January. Prints like this, or other impressions are referred to as trace fossils and do not normally contain any of the original organism.

The site and further discovery

The first two prints (numbers 1 & 2) were found by Kevren and Nina in about 1 metre of water. On 11 July 2015 the site was revisited by Nina, plus James & Ben Truebridge, Harry Keys, Karen Williams and Travis Kaandorp. Lake conditions were quite calm with a light northerly wind and wavelets of less than 100 mm near the shore. A further eight prints (numbers 3 -10) were discovered to the north of prints 1 and 2, including another very distinct one (number 8), and all were recognised as moa footprints. Possibly some of



Photo 2: Footprint 2. *Photo: Ben Truebridge*



Photo 3: View north along footprint trail beginning at footprint 5 (indistinct) to print 8 furthest from camera. Parts of print 9 are near the linear erosion feature while print 10 is behind the person. *Photo: Ben Truebridge*



Photo 1: View from south of footprints 1 & 2 looking north along the print trail. *Photo: Ben Truebridge*

the prints seen in 2015 were the same as the three or four found in 1973 by F.L. Phillips (Lockley M.G., M.R. Gregory and B.J. Gill, 2007, The ichnological record of NZ's moas: a preliminary summary). Errol Cudby and



Photo 4. Footprint 8. *Photo: Ben Truebridge*

two other snorkellers had searched the area after the 1973 report, but hadn't been able to relocate the prints. Kim Turia noted that her hapu knew of moa prints on the lake floor in the same area. Leith Rhynd recalls seeing a black and white photo, perhaps in the late 1980s or early 90s, of two footprints in this area and they appeared to be mostly dry. In comparison to the other nine NZ sites where footprints were known in 2007 (as listed by Lockley et al 2007) this Taupō site appears to contain one of the largest number of prints in NZ.

The prints and the sedimentary rock they are in probably date from long before 500-600 years ago.

The site is on a volcanogenic brown clayey-sandstone outcrop which extends into the lake in a gently undulating platform, with the sedimentary layering containing the prints truncated by erosion in places but continuous in others. The rock material is not completely lithified, being able to be scratched with driftwood. The footprints closest to the current shore were 80-90 mm deep, suggesting that the sediment at the time they were made was relatively soft and deep compared with the other prints where the sediment was harder and thinner.

The distance between print 1 and the northernmost print found (number 9) is about 60 m. Erosion has removed the rock between prints 1 & 2 and the next print found (number 3). In 2015, sand covered some of this gap and also between some of the more northerly prints. On a second visit on 29 December

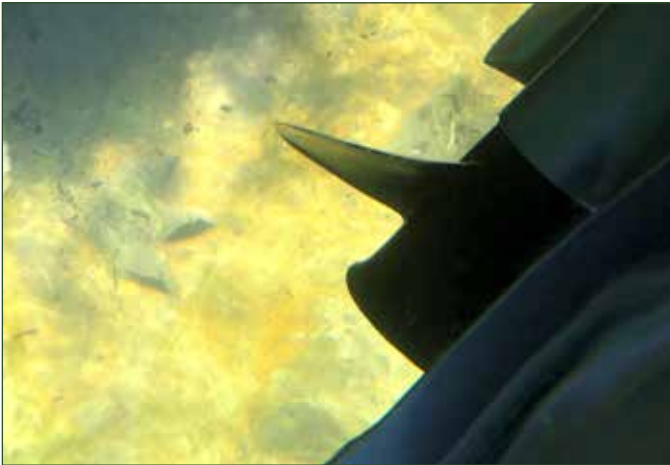


Photo 5: Print 1 from Jim's boat on 29 December 2019.
Photo: Harry Keys

2019, sand covered most of the prints except 1 and 2. Subsequent examination of the photos taken that day and in 2015 suggests the remains of one other print (0 before print 1).

Water level records potentially help confirm whether all the Taupō observations are of the same sets of prints. On 11 July 2015, prints 1 and 2 were submerged under a measured depth of 1.06 m of water, with the northern prints (3-10) in approximately 1.1 m of water. Given the level of Lake Taupō at the time (356.82 masl www.mightyriverpower.co.nz) the elevation of prints 1 & 2 is 355.76 ± 0.2 masl, 9 mm below the minimum control level of Lake Taupō (355.85 masl). The water depth was deeper and therefore lake level was higher in our 2019 visit. Records from Opus (2009, lake level history, Electricity Commission) indicate the lake level was around the level of 355.76 in the autumns of 1946 and 1978 when some the prints might have been in very shallow water or even dry. The water level was also close to or at this at times during the autumn-winters of 1973 and 1974. The lower end of Lockley et al's comment that the site they reported was "normally under 1.5-2.5 m of water" might refer to the normal operating range (1.4 m) of the lake.

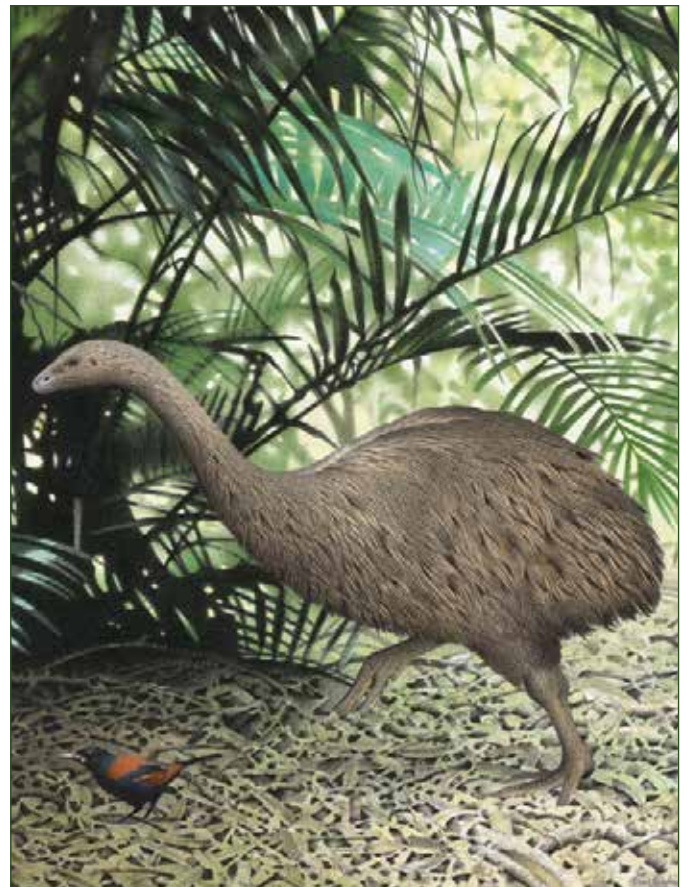
Erosion of the layer and potential loss of the prints would be a concern. As noted above, sand and also woody debris may sometimes cover up prints. An exact match of three or four prints visible in a photo obtained via ornithologist Brian Gill, and the edges of the sedimentary layer they are preserved in, could not be made with prints and layer edges seen in 2015 and 2019. If they are from the same site, this would mean that the sedimentary layer has been eroded slightly during the 42-46-year period. If so possibly one or two prints have become less visible or lost completely.

The footprints

Print 1 was about 21 m from the back of the beach in 2015, with the other prints extending apparently in one trail created by one bird walking on a course of about 15° True away from (but sub-parallel to) the current shoreline. Print 10 is offset about 0.5-1 m to the east, apparently from a bird walking in a similar direction parallel to the main trail. All the prints are at least slightly eroded in places with most being heavily eroded or otherwise quite indistinct. The most distinct prints (numbers 1, 2 and 8, see photos) were comprised of three toes clearly extending forwards from a "footpad" similar to line drawings in Lockley et al (2007) with no obvious signs of a distinct rear impression such as from a spur or other protrusion present in some moa skeletons (e.g. in Berentson Q. 2012, *Moa: the life and death of New Zealand's legendary bird*, Craig Potton Publishing). The most consistent measurements of the best-preserved footprints suggest print dimensions of 190-195 mm long and 210-215 mm wide with a step of 425-430 mm.

Some speculative conclusions

Moa prints 190 mm long found in the Gisborne area were attributed to the little bush moa (*Anomalopteryx didiformis* (aka *Dinornis dromioides*) by Richard Owen



The footprints could have possibly been made by Moariki, the Little Bush Moa, (*Anomalopteryx didiformis*). Graphic: Te Papa Museum - Paul Martinson

(Lockley et al 2007). Berentson suggested that that species may have persisted after the other species became extinct about 500-600 years ago. The prints are significantly smaller than those that would have been made by large adult females of the North Island giant moa species (*Dinornis novaezealandiae*). Generalised distribution records of the nine species of moa recognised as of July 2012 (Berentson 2012) and their sizes; speculation might suggest that other contenders for the print makers might be: Mantell's moa (*Pachyornis geranoides*) or Stout-legged moa (*Euryapteryx curtus*) (sometimes referred to as "coastal" moa but apparently distributed across the North Island) or male *D. novaezealandiae*.

The prints and the sedimentary rock they are in probably date from long before 500-600 years ago. Mike Rosenberg (GNS) suggested the rock might be at least 100,000 years old. This was long before the huge eruption of Taupō Volcano 25,000 years ago which deposited volcanic material over most of the region, probably including the footprints. That eruption altered the topography of the region and most likely the lake outlet. Erosion of the volcanic and

other sediment deposited on top of the prints (i.e. after they were made) has since re-exposed them.

Presumably the prints would have been made in relatively young wet sediment exposed above the lake level at the time or in relatively shallow water. The level of Lake Taupō presently fluctuates by more than 1.7 m interannually with an average of approximately 356.7 masl (Opus 2009) which is a metre above the level of the prints. Presumably this water depth would be too deep for such prints to be made. Ground subsidence in this area of well-known active tectonics or a lower lake level at the time could have resulted in the prints now being around a metre below the average lake level. Alternatively, the outlet of the lake may have been raised after the footprints were made, resulting in the sedimentary layer containing the footprints being in deeper water than when they were formed.

Acknowledgements

A huge thanks to Nina Booth for contacting DOC, to James Truebridge for providing boat transport to the site on both occasions and Ben Truebridge for taking the 2015 photos (photos 1-4).

PROJECT TONGARIRO – A CONSERVATION MODEL



PENNY NELSON

DEPARTMENT OF
CONSERVATION
DIRECTOR-GENERAL

This is the first time I've had the pleasure of sharing my thoughts on conservation with readers of the Tongariro Journal.

I've been the Director-General of DOC for just over 18 months now and I appreciate the unrelenting mahi of community groups like Project Tongariro.

Conservation is a big job and one DOC can't do alone. The success Project Tongariro has in mobilising more than 7000 volunteers a year for conservation contributes enormously to the unique environment of the Central Plateau.

It's easy to report on trap numbers and trees planted, but much harder to capture the joy of returning birdsong or the quiet multitudes of insect life. The communities across the Central Plateau are privileged to enjoy the fruits of Project Tongariro's nearly 40 years of dedication to conservation.

Maintaining the conservation and cultural heritage values is important to the community and is a priority for the Department.

Project Tongariro and its subsidiaries continue to be models for community collaboration in conservation and environmental education. I understand the highly successful Kids Greening Taupō model is being trailed across the maunga in the Waimarino Education Project. There must surely come a day where every child in the Central Plateau has had at least some experience of conservation through the efforts of Project Tongariro!



Lake Taupō. Photo: Jumpstory



Tongariro National Park. Photo: Jumpstory

Conservation kids become engaged adults, and with many of these contributing to conservation efforts across the rohe, it makes perfect sense for Project Tongariro to provide expertise and guidance as an Environment Hub Aotearoa for the area.

I hope the unique, close relationship shared between the Department and Project Tongariro will continue to thrive and benefit nature across the Central Plateau. At DOC we're focused on work to protect the more than 4,000 native species threatened or at risk of extinction. We also manage the largest and most diverse portfolio of cultural heritage sites in New Zealand.

This year has been a challenge because of severe weather events. About 500 of our assets across the top half of the North Island were battered by Cyclone Gabrielle in February. More than 80% of those sites have been checked, cleaned up, repaired and re-opened to the public. Others will take more time. We are also working to understand the impacts on our native wildlife and ecosystems from the cyclone.

Against this backdrop are some unique challenges in Tongariro.

I know there is huge community and stakeholder concern about the future of the Ruapehu ski fields

once the season comes to an end. Please be assured we are working with iwi and a range of stakeholders on these issues, and we will continue to work together as we move to deliver the best outcomes for the region.

The multiple challenges arising in Tongariro National Park have made for an interesting year, for both conservation and communities in the Central Plateau.

While it's reassuring for the region to see international visitors returning following the COVID-19 pandemic, we can expect visitors to put pressure on cultural areas and infrastructure. Maintaining the conservation and cultural heritage values is important to the community and is a priority for the Department. We want to better manage these challenges so we can protect and preserve Tongariro for future generations to enjoy. It's important we don't just pick up where we left off before the pandemic began. We are consulting with the community on these challenges and hope to have some solutions to road test in coming months.

Ngā mihi nui ki tō mahi aroha.
Huge respect for your work of love.

Penny Nelson
DOC Director-General

RANGATAUA: BATTLING FOR OUR NIGHTLIFE



A tiny short-tailed bat at Rangataua. *Photo by: A Beath/DOC*



KRYSIA NOWAK

DOC MEDIA AND
COMMUNICATION ADVISOR

Just a few kilometres from Ohakune township the Rangataua nightlife is exceptional, though locals might not know it. This party has a very exclusive guest list – short-tailed bats*. Across the Rangataua Conservation Area, at least 8,500 bats are thriving, thanks to dedicated pest control contributed by the Department of Conservation and Ngāti Rangī.

Lesser short-tailed bats comprise three subspecies. The central subspecies found at Rangataua is

classified as 'at risk, declining'. These tiny battlers weigh up to 15 grams – only slightly more than a tablespoon of sugar – and require old, hollow trees for their roosts.

A chance observer might be surprised to find these minute party animals crawling on the forest floor. Short-tailed bats are one of the few bat species worldwide adapted for ground hunting – using folded wings as front limbs.

In both size and habit, short-tailed bats present an irresistible buffet to introduced predators like rats, stoats, and cats – a story well played out in Rangataua.

Despite the difficulties of monitoring, it is known that the bat population in Rangataua was potentially declining and most certainly at risk across the 1990s and early 2000s. Localised predator control failed to address the large range covered by the bats, with



A cluster of short-tailed bats being very social.
 Photo: B.D. Lloyd/DOC

recorded roosting concentrations in both the north and south of the reserve (Figure 1).

The introduction of regular aerial 1080 from 2009 onwards proved a turning point. The effective control of pests over 10,000 hectares provided the sustained safety needed for the population to begin its recovery. Unfortunately, the limited range of the trapping efforts between aerial control years still left the population at risk.

To rectify that, the iwi-led trapping network encompasses the second roosting concentration identified in the northern part of the reserve.



Ranger Luke Easton extracting a short-tailed bat from a mist-net for monitoring in Rangataua. Photo: A Beath/DOC

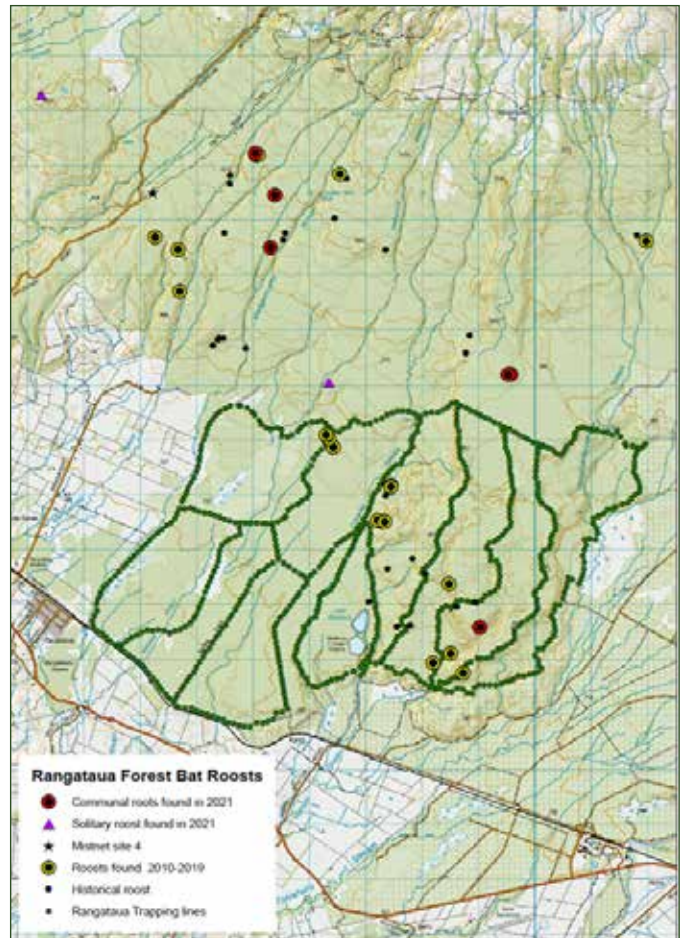


Figure 1. Roosting concentrations of short-tailed bats in Rangataua reserve – note the aggregations in the North and South. Existing DOC trap-lines are in green. DOC

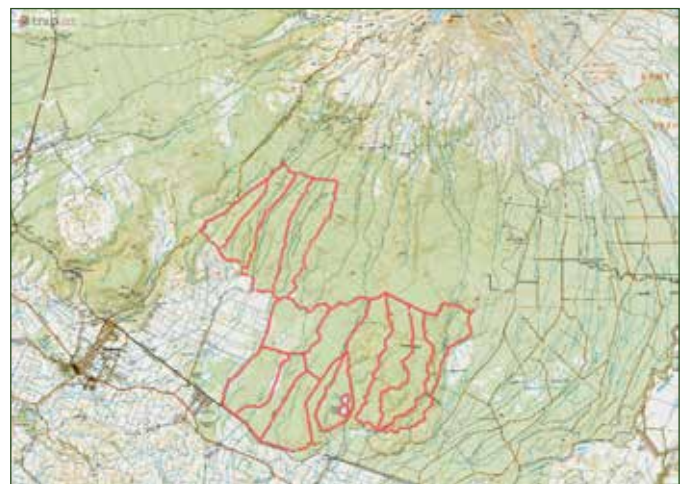


Figure 2. Trap-lines showing the extended area of trapping taken on by Ngāti Rangī. DOC/TrapNZ

Monitoring remains a challenge, with technology and nature each providing their own trials to staff. Despite this, the mood is upbeat that the Rangataua bats are being given their best opportunity to continue their quietly spectacular night lives.

**Long-tailed bats may be in Rangataua but are not monitored*

COLLECTING NATIVE SEEDLINGS



HEIDI PRITCHARD

KIDS GREENING TAUPŌ
COORDINATOR



KGT coordinators Rachel Thompson and Heidi Pritchard with New Zealand Forest Management Environmental Planner, Jackie Eganon, the first of many successful seedling collections.
Photo: Erich Lunzer

Kids Greening Taupō (KGT) recognises the potential to salvage native seedlings growing under a pine forest canopy, as they are typically destroyed during pine tree harvesting. However, obtaining permission for this endeavour was a challenge. In 2022, New Zealand Forestry Management (NZFM) expressed their willingness to support the initiative and allowed KGT to lead groups of students onto their land to collect native seedlings with the support of Jackie Egan, NZFM's Environmental Planner.

Overall, hundreds of seedlings were saved from certain destruction. In addition, it provided free plants to be used in a variety of school projects all around Taupō.

The initial session occurred with Lake Taupō Christian School students seeking native plants. A diverse range of sub-canopy and ground cover plants such as kowaowao (hound's tongue fern), tree ferns and



Lake Taupō Christian School working with Tawa Early Learning Centre to plant native seedlings in Crown Park Gully.
Photo: Rachel Thompson



A small selection of the hundreds of native seedlings collected.
Photo: Rachel Thompson

native seedlings were successfully gathered. Some plants were potted up to grow on before planting and others were planted directly on their school grounds. Due to having a plethora of seedlings, a tuakana-teina relationship developed with Tawa Early Learning Centre when they joined forces to transplant them into the Crown Park gully, a long-term restoration project.

The project's success prompted KGT to venture out again with their Student Leaders and NZFM. A couple of real keen students followed a policy of "No Native Left Behind" and extracted a few very large ferns. Due to their size, they were planted directly



KGT Senior Student Leader Lilja Tinworth rescuing a native seedling. *Photo: Rachel Thompson*

into a restoration site with an established canopy, and a year later are still thriving. Overall, hundreds of seedlings were saved from certain destruction. In addition, it provided free plants to be used in a variety of school projects all around Taupō.

In 2023, the wreckage created by Cyclone Gabrielle created another opportunity for seedling collection. Waipāhīhī Primary School KGT Student Leaders collaborated with KGT and Waipāhīhī Botanical Gardens Society, with the permission and the supervision of Graeme Robinson to collect kōhuhu that had sprouted under the parent trees. If left unattended, they would not have the space to grow



Graham Robinson with the Waipāhīhī KGT Student Leaders collecting seedlings at the Botanical Gardens. *Photo: Rachel Thompson*

properly. The seedlings were collected and taken back to the school with the intention of nurturing them until they could be donated to cyclone-affected schools to help restore their patch of native bush. Utilising their new skills, KGT leaders engaged more schools and ECE centres in collecting and transplanting plants. Rachel, with Central Kids Northwood Kindergarten, saved hundreds of korokia. She even started collecting a variety of natives from under the feijoa trees in her personal garden. Hinemoa, along with Te Kohanga Reo o Kimihia, planted many of the original NZFM seedlings from the pine forest into Brentwood Gully. Heidi and Country Kidz Early Childhood Centre collected kōwhai seedlings from around their sandpit which become gifts to the children when they leave for school.



KGT Student Leaders Oscar Bell and Lucy Forrest gathering seedlings with Taupō Intermediate School. *Photo: Rachel Thompson*

Our relationship with NZFM continues this year. After extensive weeding of the Taupō Intermediate School gully, the large native trees were free from weeds, but surrounded by bare earth. Transplanting ferns and native seedlings from one of NZFM forests is the perfect solution for an area like this. The ferns and seedlings will provide an instant understorey for Taupō Intermediate's new outdoor classroom area.

This project has facilitated valuable student learning opportunities while also contributing to the restoration of the Taupō region's biodiversity. We are not only saving trees that would not have a chance to fully grow in their environment, but also acquiring free native plants to use in our restoration areas. This has allowed us to get many more native plants in the ground than in previous years. Thank you so much, NZ Forest Managers!

MAHI AROHA 2023



ANNA CALVERT

PROJECT TONGARIRO
CONSERVATION
COORDINATOR

Although it felt like summer never properly arrived this year, we were still able to deliver another successful Mahi Aroha programme. Thank you to everyone who was involved; no matter how big or small your mahi, we simply couldn't have done it without you!

This year of a total of 393 participants, about half said it was their first Mahi Aroha experience. There were 25 unique trips/events planned and 33 trips/events listed on the calendar, a large increase from last year





Beautiful watercolours from the Fine Feathered Friends Nature Art session with Sue Graham



Tamariki listening to Sleep Little Kiwi, Sleep during the Nocturnal Animals with Kids Greening Taupō library session



Creepy Crawly Bug Catchers Workshop hosted by EnviroSchools



Collecting cicada shells during Waipāhīhī Botanical Gardens Hīkoi hosted by Kids Greening Taupō



Examining catches during Creepy Crawly Bug Catchers Workshop hosted by EnviroSchools



Exploring the lungs of Lake Taupō during the Te Matapuna wetland walk



Pulling wilding conifer seedlings



Avian Avoidance Training



Te Porere Redoubt

Unfortunately, nine events were cancelled, mainly due to poor weather and the minimum number of participants not reached for the trip to proceed.



Views during Mt Tihia descent

As part of the booking process, we also offered participants the option to add a donation when booking. We are delighted that several donations were made to us and other community groups who helped support the programme.

Planning for Mahi Aroha 2024 is underway, so keep your eyes peeled later in the year for our calendar release.

Photos: *Thank you to the activity participants who supplied photos*



Save the Kiwi rangers performing a health check during the Wairakei Golf and Sanctuary tour

A 'TRAINEE' GROUND FOR SUCCESS



CANDACE GRAHAM

DOC COMMUNITY RANGER

Running for over 20 years, the Trainee Ranger Programme was introduced with an initial focus on bringing young people into the Department of Conservation (DOC). Produced in conjunction with the Nelson Marlborough Institute of Technology (NMIT), it aims to prepare graduates for delivery work within conservation, helping them to secure long-term jobs.

Initially, students start the year-long conservation course gaining NZQA unit standards in chainsaw,

firefighting, machinery, and first-aid competencies, in addition to weed management, native plant identification, chemical application, and education in Te Ao Māori. To reinforce these, students can go on to apply for more hands-on learning during a two-year Ranger Development Programme within DOC.

The Central Plateau (CP) is a very attractive district for trainee rangers. It encompasses the Rangitaiki Frost Flats in the east of Lake Taupō, Great Lake Trails to the west, and the most visited natural site in New Zealand, Huka Falls, in the north. Some of the projects mean a trainee ranger could be mustering Kaimanawa wild horses in the tussock lands of Waiouru one day, and be in a helicopter atop the Kaimanawa Ranges surveying wilding pines the next. Working alongside a world-renowned sport fishery managed by our DOC Fisheries team also helps to entice a variety of applicants to the area.



Luke Poulson, Trainee Ranger for DOC CP and Taupō Fisheries in 2019. *Photo: DOC*



Anthony McNamara, past trainee ranger. *Photo: DOC*

The success of the Trainee Ranger Programme is noticeable within our local district, where a myriad students have been hosted in the past. There are approximately 100 graduates of the NMIT programme currently working for DOC across the country, three of whom are working within the CP team full-time, and many more also employed locally in the past.



Jane Williams, past trainee ranger. *Photo: DOC*

Since 2022, the DOC Central Plateau team have been lucky to receive our latest trainee ranger, Isaac Linklater, to work across the Recreation (Heritage & Visitor), Biodiversity, Community, and Taupō Fishery workstreams. Raised in Auckland, Isaac enjoys spending a lot of time in the outdoors sea-kayaking, hiking and mountain biking. In 2019, he completed a degree in Sport and Recreation with a major in Outdoor Education, but he wanted more of a hands-on and practical way to make his mark in conservation.

“Embrace it and try everything and all the avenues. Put yourself out there and see what sticks.”

Isaac Linklater

One project which has been a highlight for Isaac since working in our district over the last year, was in the Remote Experience Zone (REZ) of the Kaimanawa Forest Park. Supporting Powelliphanta protection, Isaac was a part of a six-person team working to maintain the possum trap-line networks.



Isaac in helicopter with Ben Scrimgeour during a trip in the Remote Experience Zone, Kaimanawa Forest Park. *Photo: DOC*



Isaac Linklater at work chainsawing. *Photo: DOC*



Isaac on a swingbridge in Te Urewera. *Photo: DOC*



DOC Central Plateau team about to start their pack test. *Photo: Jo Mendonca*

"We needed to obtain new data, re-tag the trap lines, and replace any broken traps. This was a five-day trip in the backcountry with a team of six experienced rangers."

Isaac has also been encouraged to work across districts and within different work programmes. He took up this opportunity for a short time in Te Urewera, alongside DOC Inspector Ben Pigott. This was another highlight for Isaac, working in the backcountry for eight days building a swing bridge from scratch.

When I asked Isaac for his thoughts about being a trainee ranger, he said:

"It's a starting block which is what I wanted. Even though the role is 'trainee ranger', I am doing all the roles a full-time ranger would. I'm learning from some very experienced and knowledgeable individuals."

With a delivery team made up of very experienced members, we can offer Isaac a team culture that provides connectedness, mentorship and support, encouraging him to perform to the best of his ability. Isaac is looking forward to his final year of the programme and hopes to add more skills to his tree-felling qualification and be a part of the Kaimanawa horse muster. He is excited to have more opportunities to become a team leader. He also has some great advice to share for anyone looking to join DOC in the future:

"Embrace it and try everything and all the avenues. Put yourself out there and see what sticks."

Thanks for working with us, Isaac. We wish you all the best in all your adventures ahead, and have no doubt we will continue to see your great work towards conservation in the future.

WAIMARINO RESTORATION



CLODAGH COSTELLO

WAIMARINO
ENVIRONMENTAL
EDUCATION COORDINATOR

This past year has seen Project Tongariro initiate the Waimarino Restoration Project in the Southern



Checking in on our kōwhai at Waiouru Primary School.
Photo: Emily Jones



Giving back to the Mākōtuku Track with Raetihi School.
Photo: Erica Haumate

Their senses were awoken to their surroundings, and they started to share their flora and fungi discoveries with their peers, recording their observations beautifully.

Ruapehu rohe (area). It is based upon the same environmental education principles as our successful Kids Greening Taupō Education project. My role as Environmental Education Coordinator is taking shape through the relationships I am building



Mulching at the school's Miro St restoration site with Ohakune Primary. Photo: Suzi Couch

with schools and the wider community. It is important that this work is authentic and meaningful to our unique rohe under Ruapehu. I have the privilege of working with 10 learning centres and have been facilitating native bush experiences, providing in-school education sessions, and connecting schools to local restoration opportunities. The hope is that this will strengthen the innate bond our tamariki (children) have with the natural world around them.

I am actively learning in this role; tamariki and nature continuously surprise me! Recently I was out observing forest canopy layers with a group of chatty and lively intermediate school students. I wondered if they would be able to turn their attention away from their conversations, and toward the richness of life in the ngahere (forest). I asked them to spread out, choose a spot, and sit down for two minutes of silence. At the end of the two minutes, they asked to do it again. And so we did! The curiosity, engagement and focus that came after the silence blew me away.

Their senses were awoken to their surroundings, and they started to share their flora and fungi discoveries with their peers, recording their observations beautifully.

This year, Emily Jones, a kaiako (teacher) at Waiouru Primary School, has undertaken a restoration project with me to celebrate the school's 75th anniversary. Each fortnight, I spend half a day with Emily and her class. So far we have explored what biodiversity means, made nature journals to record our observations, befriended trees living on the school grounds, explored the journey from seed to tree, created a collective collage to envision the planting, and become beady-eyed fungi hunters.

Recently, we were out with her year 4 class. We had been learning about introduced predators, and becoming 'pest detectives'. Students had their nature journals and magnifying glasses, and were searching for signs of pest activity (their favourite being droppings!) We found a dead hedgehog and observed maggots and woodlice on the decomposing body. After we had emerged from the trees, buzzing with all our observations, a piercing scream rang out. A student had stood on a wasp nest, concealed under the leaf litter. And very, very angry German wasps rushed out and stung most of the students as they fled.

I was very concerned that this experience would have instilled a fear of the outdoors, and that the students would never want to explore again. On my next visit, we spoke about the experience, and how these wasps are pests not only to us, but also to our native birds, insects, and beech forests. Their resilience and desire for adventure won out against fear, and we were back outside exploring again!



Water monitoring in Rangataua ngahere with Ruapehu College and Horizons. *Photo: Meredith Wilson*

Reflecting on a year in this role, I am heartened by the relationships that have been built. I want to thank all the akōnga (learners) and kaiako I have worked with, our amazing community, and Project Tongariro for trusting me in this position, giving me opportunities



Visiting Rotokura on the first day of Kiwi Forever. *Photo: Clodagh Costello*



Rangatahi considered the impacts of the Tongariro Power Scheme with Keith Wood and Cam Speedy during Kiwi Forever. *Photo: Meredith Wilson*

to try things out, and supporting me to be a lifelong learner. I look forward to continuing to support and enrich environmental connection and learning in this rohe.

Kiwi Forever 2023

Kiwi Forever is a conservation and cultural marae-based programme that takes place once a year over six days. The programme has been running annually since 2006 and is a partnership between Ngāti Rangī, the Department of Conservation, Genesis Energy and now Project Tongariro.

This year, 15 rangatahi (young people) from Ruapehu, Whanganui and Taupō, alongside four pre-service teachers from the University of Waikato, spent the week at Tirorangi Marae in Karioi. The week was full of hands-on experiential learning about conservation



In the sunshine at Tiorangi Marae on the final day of Kiwi Forever. *Photo: Meredith Wilson*

and mātauranga Māori, a holistic worldview of nature, people and place. Keith Wood, one of the programme founders, guided the rangatahi in their learning, reflections, and development of leadership skills.

The importance of Aotearoa's unique biodiversity was highlighted through learning about the Ngāti Rangi worldview, participating in pest control work, debating renewable energy and its impacts, exploring kiwi and whio conservation issues, getting stuck into restoration work and more.

An amazing range of passionate trappers have worked with the rangatahi this year. Cam Speedy, the Ruapehu Worx team, and Shirley Potter shared their contagious enthusiasm for this mahi (work) and many of the rangatahi have already begun trapping since leaving the programme!

On the final day, the students presented their learnings from the week to stakeholders, friends and whānau. It was wonderful to hear, in their own words, the knowledge they now hold. One of the most powerful anecdotes for me was hearing from a student with eco-anxiety; they shared how they now feel that they can take action for a better world.



Sharing passion for fungi at Greening Taupō Day. *Photo: Anna Calvert*

Fungal Foray 22/05/23 - 24/05/23

For my professional development this year, I spent three days in Rotorua, participating in a fungal foray hosted by the Fungal Network of New Zealand (FUNNZ). On the first morning, I attended a workshop for beginners that ran through the correct way to take photos of fungi for identification, and how to collect samples. The rest of the day was spent at Dansey Road Scenic Reserve, where I felt like a child on a treasure hunt, and burst with excitement at each new find!



Every specimen collected on day 2 of the Fungal Foray! Photo: Clodagh Costello

Day two was spent at Maungatautari Sanctuary. This was my first visit to the sanctuary and in the five hours I spent there, I travelled maybe 500m. Fungi



Fungi find! Genus *Rhizocybe*. Photo: Clodagh Costello

hunting certainly slows the pace.

On day three, a colloquium* was held at Scion. It was so interesting listening to what is happening in the fungal world at large. What really struck me is how much we don't know about the fungi kingdom. Leaving the foray, I have new skills to take back to my students, knowledge to share about the magical and strange behaviour of our fungi, and a desire to inspire students to become discoverers of unknown species.

*A colloquium differs from a seminar in that several academics (and occasionally outside guests) participate in the colloquium, preparing papers and articles to which the students in the class respond through discussion and written assignments.

GREENING TAUPŌ DAY 2023



RACHEL THOMPSON

KIDS GREENING TAUPŌ LEAD
EDUCATION COORDINATOR

Greening Taupō Day has fast become more than just an Arbor Day planting event. It has blossomed into a festival of Environmental Education for the region and a day of celebration that the whole community engages in. Every school and numerous kindergartens take on environmental projects during the week and hold a 'dress in green' fundraising day.



Students plant in the rain. *Photo: Rachel Thompson*



Students help to paint the town green for Greening Taupō Day. *Photo: Rachel Thompson*

The Arbor Day event this year started with an unexpected downpour of rain which had the thousand people in attendance ducking for cover and our coordinators huddled under an umbrella with the mayor trying to get the microphone to work. Our plans for a big opening kōrero and planting demonstration abruptly changed. We quickly said a few words then declared the day open. Many attendees chose to brave the elements to plant, and the 3000 trees were planted in an hour. These were added to the 4500 trees planted at last year's event to become the beginnings of a native forest.



View of the planting site and education stalls in the background. *Photo: Rachel Thompson*

Robyn from Greening Taupō did a fantastic job of organising the planting aspect of the day. Trees that Count and funds raised at last year's event funded the trees, Mynoke generously donated vermicast, Taupō District Council (TDC) and the Department of Conservation (DOC) did the site preparation, Wicked Weeder volunteers and students from Taupō Intermediate unloaded the plants and put them, along with vermicast and fertiliser, in all of the holes ready for the day.



Our team (Project Tongariro, Greening Taupō, Kids Greening Taupō, Predator Free Taupō & Waimarino Restoration) and some of our kids.
Photo: Rachel Thompson

Over 40 local businesses and organisations had stands on-site with activities for the children. Most of them had an environmental education message. Participants could learn about native bats from DOC, build a trap with Forest and Bird, investigate freshwater macro-invertebrates with the Tongariro Trout Centre, shoot predators using nerf guns with Contact Energy, find out about bird banding with Maungatautari Sanctuary Mountain, dissect owl pellets with Wingspan, guess the native plant species with Ngaroma Nurseries, hunt for worms like a kiwi



Donovan Bixley gifts the first ever copy of his brand new book *RUSTLE - Native Plants of Aotearoa* to Kids Greening Taupō.
Photo: Rachel Thompson



Trev Terry on the barbecue tools cooks up 1,400 sausages
Photo: Rachel Thompson



Students learning about the kauri root system and how kauri dieback spreads. Photo: Rachel Thompson



A student connects with New Zealand native wētā. *Photo: Rachel Thompson*

with Save the Kiwi, learn about native bees with Huka Honey Hive, repurpose old books with Taupō library, play a recycling game with TDC, and take part in a wetland experiment or see the kauri dieback model with Waikato Regional Council.

There was bug hunting, fungi on display, bush tea tasting, and obstacle courses. Children could ride bikes on the new pump track with Kids Bike Taupō or have a go with a frisbee thanks to Taupō Disc Golf. There were fire engines and police cars to check out, and face painting for kids. Local author/illustrator Donovan Bixley painted a beautiful karearea and signed books.

These were just some of the fun activities offered.

The food served on the day was a massive collaborative effort. In order to be more sustainable, Epro sent an employee to hunt wild deer, resulting in 500 donated venison sausages. DOC contributed another 400 sausages and Trev Terry Marine not only

provided another 500 sausages, but also supplied the gear and staff to cook them all. Countdown Taupō donated bread, sauces and buns. Those buns were served alongside soup made by The Bistro, with rescued vegetables from Misfit Garden, whose staff were also there handing out free fruit to children. Biodegradable cups donated by Mynoke for the soup could be taken to the Mitre 10 MEGA stand and used to pot up a plant to take home.

Overall, in spite of the weather, a fantastic day was had by all involved. It is pretty special to see so many people from our community come together to make our local environment better for biodiversity and to celebrate local conservation. It is a one-of-a-kind community event that we are incredibly proud of.

TEEN ANGST ON THE MANGATEPOPO



Whoio pair on the Mangatepopo. Photo: Steven Cox, DOC



KRYSIA NOWAK

DOC MEDIA AND
COMMUNICATION ADVISOR

Society has something of an expectation of our children: they should grow up, weather the highs and lows of the tumultuous teenage years, then fly the nest. More recently this expectation has been challenged, as young adults stay at home later and later. Some people think it might be rising costs, but now this trend has made its way to the whoio world.

Whoio, our threatened white-water specialist duck species, have a stronghold in the Central

North Island thanks to intensive predator control and targeted releases of captive-bred birds. The Department of Conservation in Tongariro regularly monitors these populations, particularly for breeding success.

Like many birds, whoio take advantage of warmer weather to raise their ducklings, with eggs



Whoio ducklings on the river. Ducklings are looked after by both parents until they fledge (gain their feathers).

Photo: Tyrone Smith/DOC

hatching around October/November. Whio actively parent their ducklings until fledging, keeping them safe in the rough and tumble environment of fast-flowing rivers. Post fledging, it is time for young whio to start making their way in the world. They usually do this (as many young do) by getting together in gangs of juveniles, perhaps to show off their new feathers.

Of course, not all teenagers are quite ready to hang out with their peers.

In mid-April this year, two DOC rangers were performing a trapping and monitoring trip down the Mangatepopo River. These trips are conducted to provide as little interference to the whio as possible. However one pair of whio took exception to even the slightest human presence.

The rangers, Luke and Steven, are part of a team who had been monitoring whio whānau down this stretch through the breeding season. They knew the pair had three ducklings, two of whom had happily flown the coop. Just one female juvenile remained.



Ranger Luke carefully making his way through the rocks. Note the safety equipment for river work! *Photo: Steven Cox/DOC*

After a long breeding season, Mum and Dad who were perhaps overdue for a little time to themselves. Spying the rangers, they took the opportunity to fly off upstream, leaving their late-bloomer at home.



The adult pair (yellow eyes) with their late bloomer. *Photo: Steven Cox/DOC*

Young 'stay-at-home', unruffled, simply upped and relocated to the territory next door. The adult whio there, whose ducklings had long since left home, were initially tolerant, but soon followed suit and flew upstream.

The wee lass was left alone, following upstream slowly. To the rangers she appeared dejected, which would be understandable after being ditched twice!

Ranger Luke tells us the young whio would have reunited with her parents further upstream. Hopefully, the little break was enough to refresh Mum and Dad for their parental duties, for however long their youngling chooses to stay at home.

There's no forcing a teenager to grow up!



Young 'stay-at-home', somewhat dejected. *Photo: Steven Cox/DOC*

WHAT'S UP IN THE SOUTH



KAREN GRIMWADE

PROJECT TONGARIRO
AND TONGARIRO TAUPŌ
CONSERVATION BOARD
MEMBER

Tūroa Alpine Flush

Firstly, it is with huge pleasure I can say that the boundary markers and interpretation sign at the Tūroa Alpine Flush are finally installed. This plan has been on the books for literally years! Protection of this Flush has been talked about and worried over for decades, but it was in late 2019 (remember that time before COVID-19?) that Project Tongariro met with a purpose, along with RAL staff, iwi, and DOC and it was agreed by all to proceed to install boundary markers and interpretation signs. It was agreed upon at the time that Project Tongariro would 'lead' the work. This was to prove to be a 'difficult' job in many respects.

But thanks to a small working group persisting, we can finally report that the boundary markers were installed in late May. The posts were cleverly designed by one of our friends and associates, Herwi Scheltus. The posts were to mark each survey point – so that the flush can no longer be 'infringed' upon and gradually reduced in size (yes – it has happened in the past sadly). They are i-beam posts with caps that can hold the square profile galvanised poles that the ski area staff use to mark out the boundary – and hold the signs donated by Project Tongariro that respectfully ask people to take care of the flush (pictured).

The posts had to be driven into the volcanic ground and so required heavy machinery and an experienced and clever eye to install. Herwi's relationship with Russell Le Quesne of TPP contracting has of immense value here, as Russell and his staff are very experienced working in Tongariro National Park and were able to undertake this job – once the weather allowed – and do so with minimum fuss and damage to the landscape. We also need to thank Jenny Hayward of DOC who has stuck with this work

through thick and thin – and despite changing jobs within DOC – she undertook to stick around through thick and thin to see it completed – and she did. The interpretation plans were scaled down a bit, but



The new Tūroa Alpine Flush panel at Tūroa skifield.
Photo: Karen Grimwade



Tūroa Alpine Flush boundary markers. *Photos: Karen Grimwade*

we have a sign installed that explains what the Tūroa Alpine Flush is, what risks it faces and how people can help. The text can be updated easily when and if we need to as the method of construction being a vinyl print on steel background makes it easy to change – and in the harsh alpine environment, it will probably

need replacement every few years anyway, so we can be flexible as iwi aspirations change. There is also a snow pole to replace the long ago gone one that used to mark the snow level – and indicate when ski field machinery etc could safely pass across the flush. Needless to say, this will likely be less often as snow levels seem to recede. The posts will be marked by GPS and have been photographed and apart from the signage content probably needing an update as Ngati Rangi and Uenuku settlements evolve – this job is complete for now.

Rongokaupo Wetland

After a busy time over the summer, things have been quiet at the wetland over winter.. Project Tongariro have been successful in receiving a small amount of Horizons funding to follow up on the biodiversity work (weeds and a trap line) already done. I feel strongly that this kind of Biodiversity funding needs to be followed up on – as biodiversity work in particular can



Above left: Rongokaupo Wetland planting. Above right: A new fenceline at the wetland. Photos: Karen Grimwade



The restored path at Rongokaupo Wetland. Photo: Karen Grimwade

quickly go backwards without ongoing maintenance work. I worry that funders often see the first ‘flush’ of a project as the glamour end and like the gains and media coverage this entails, but follow up is always essential – or you may as well not have started. So I am grateful to Horizons for seeing the value in some follow up work – most of which we will contract Ruapehu Worx to do over summer and some volunteer work done by Project Tongariro.

On the positive side, the wetland looks very much cared for. There are fewer weeds, fewer pests (trap line run by Ruapehu Worx) and the road boundary is now fenced. The path has been reinstated and new trees planted.

We have new botanical and bird identification signs ready to install and will work to do so over the year. In the process of working at the wetland we have discovered a few nasty and well established weeds in the interior – probably seeded from the nearby Old Coach Road where they are well established on the margins of the Park, Himalayan Honeysuckle and Chilean Flame weed – nasty and would be good to get rid of these as potential seed sources inside the wetland. The owners Atihau Incorporation have been very engaged and helpful in all our work here. And Ruapehu Worx are a pleasure to work with as always.

Predator Free Ohakune

As part of our remit to support Conservation in our community, Project Tongariro has been working to support Predator Free Ohakune (PFO). Predator Free Ohakune has been around for a while, but has essentially just been a couple of very dedicated people checking trap lines along the Mangawhero River and along the Jubilee Park track.



Predator Free Ohakune and Project Tongariro Trapbuilding Workshop at the Carrot Festival. Photo: Karen Grimwade

Along with Robert Milne (of Ruapehu Bulletin fame), we have been working with a small committee of locals to get a bit more traction for trapping and support for the existing trap lines. We were very grateful to get some funding support from Predator Free Trust NZ to go towards 'back yard trapping' and we recently attended the Carrot Festival with a Predator Free stand to raise Predator Free Ohakune's profile.



The Predator Free Ohakune stand at the annual Carrot Festival. *Photo: Karen Grimwade*

Kiri, Robyn and Clodagh from Project Tongariro came along to help us and ran a 'trap building workshop' for local kids. It was a big hit with over 30 traps being made by the local kids.



Robyn Ellis and Kiri Te Wano helped out with Predator Free Ohakune. *Photo: Karen Grimwade*

Our Predator Free Ohakune team did a great job explaining trapping and being on hand all day to talk to interested people. We ended up with a good list of people registering an interest in becoming more involved in trapping lines or hosting backyard traps. A successful day where we learnt a lot.

The PFO team are now working on getting traps out into the backyards of all the people who registered interest. This is not limited to Ohakune - Rangataua has a small but strong trapping community and we would love to link up with Horopito and Raetihi in time. The funding from Predator Free Trust NZ helped us to buy and build a number of DOC 200s that we can install and check around town - and we would like to find funding to get more, as the interest is definitely there. Also we have a couple of possum traps we can lend if people need - they just need to contact us via the Facebook page or talk to Robert Milne. Next up is to organise a workshop with Cam Speedy to get us all up to speed on how best to be placing and operating our traps to best advantage - probably after the winter season is over and we all have a bit more time.

Supporting the Conservation Community

DOC Community Funding came up again for the first time since COVID-19 lockdowns and restrictions. Project Tongariro has applied for a couple of projects. The project I have been involved in is the Erua Mill Site. Murray Wilson, National Park Village identity, ex RDC Councillor and Conservation Board member, is a good friend to Project Tongariro and always around when we need a bit of help or information about the National Park/Waimarino area.



Interesting historic remnant at the Erua Mill site. Why is there a rail line here? *Photo: Karen Grimwade*

Here is what he had to say about the Erua Mill;

"The Erua Road Sawmill Project is an exciting opportunity to survey and interpret the mill site with a view to establishing a public site of historic interest.

As it is adjacent to the Mountains to Sea Cycle trail on Erua Road it would rank alongside the proposed Pokaka Eco Sanctuary as a unique site and to tell a story of the pioneer logging industry. There is no other such site on the Mountains to Sea Trail.

Not only as a standalone site it also adds to the sites of interest discovered along the tramline to National Park Village where the logs were transported on the North island main Trunk Line to the Martin Sash & Door Company's mill at Marton Junction for finishing."

Update: Unfortunately, we missed out on the DOC Community Fund for Erua Mill. We are hoping to find funding for the site via other heritage funding options.

A lot of what we do supporting the Conservation Community in the Waimarino rohe is now under Clodagh's remit with her wonderful work with Waimarino Restoration (supporting the conservation education work done in the Waimarino among other things) and with Project Tongariro's sponsorship of Kiwi Forever. (See Clodagh's article on page 27)



Erua Mill Site - remnants of a tank from early mill days.
Photo: Karen Grimwade

HISTORIC WAIHOHONU HUT GETS THE FULL TREATMENT



MITCHELL BLACK

DOC RANGER —
COMMUNITY | AO HĀPORI

The historic Waihohonu Hut still stands as the oldest example of an early mountain hut in Aotearoa New Zealand, and this year it received some tender love and care from our passionate volunteers and friends at Project Tongariro.

Almost 120 years after it was first built in 1904, a dozen eager helpers made the hike in from Waihohonu carpark armed with drop sheets, wire brushes, rollers, and paintbrushes. Their task was to make short work of the weather damage on the historic Waihohonu Hut and administer a healthy dose

of rust protection and a fresh coat of paint, generously sponsored by our friends at Dulux.

Rangers Ben and Dani deserve a big thanks for doing the heavy lifting, carrying the tins of paint the three kilometres to the hut the night before. But with the addition of our crew of volunteers, everyone got stuck into task number two: stripping back the areas of weathering around the base of the Heritage Category 1 hut.

After the walls came the windows, their sills and canopies stripped back and sanded, eagerly awaiting the fresh coat of paint. While the interior received attention as the perspex panels were removed and wiped clean, display items were cleared of errant bug carcasses and dust, and the rooms freshened up.

With paintbrushes in hand, drop sheets down and the occasional piece of clothing painted as collateral, the walls of the hut received their long-awaited love and care. Extra attention was given to ensure paint



stayed on walls as the crew worked away in the Dual Heritage status National Park.

With the exterior display panels cleaned of grime, the hut was ready to welcome a new band of visitors. Many of them came to see the work as it was happening on the day, popping in as the team worked and sharing their appreciation of the mahi being put in.

Thanks to the enthusiasm and passion of all the helpers on the day, the building which once served as Ruapehu's first ski lodge in the 1920's gets a lease for a few more seasons all this time later.



Clockwise: The team before work began. Work well underway. Putting the final touches to an epic restoration. The team at the end of the job in front of the Historic Waihohonu Hut. All photos: Steven Cox/DOC

ORUATUA RECREATION RESTORATION 2022 -2023



SHIRLEY POTTER

PROJECT TONGARIRO
EXECUTIVE MEMBER

This report covers the period from 1 July 2022 to 30 June 2023.

This season can be summed up with a few words; rain, floods, weeds, fabulous plant growth and more weeds, and yet another flood in the reserve! From July 2022 to the end of June 2023 we have planted 2700 trees, making our total since 2014 just under 30,000. Our volunteer hours just keep climbing as the project gathers momentum, with 3300 hours in the last year.

Our funders deserve to be mentioned and thanked again, namely: The Department of Corrections, Waikato Catchment Ecological Enhancement

Trust (WCEET), Te Uru Rakau (Ministry for Primary Industries), Waikato Regional Council (WRC), Department of Conservation (DOC), and the Ron and Edna Greenwood Trust. The Sargood Trust and Turangi Tongariro Community Fund have provided grants for paying part timers. This is so important as we can't keep on top of the weeds with volunteers only. Generous donations from locals add a significant boost to our funds as well.

Our community planting days are well attended no matter what the weather throws at us, with new faces turning up each time.

We are fortunate to have had a few post-COVID-19 volunteer groups return. St Kentigerns College came in late November/December 2022. The 18 groups (of up to 32 students) were shared with us and Rongomai. Strangely for that time of year we were able to put on a couple of days of shocking weather, fortunately this did not deter them. Flooding meant we had to send a couple of the groups over to Oruatua Ave to help Collette in a dry patch! The broom was given a hiding with students working in pairs with loppers and gel.



St Kentigerns group on a fine day. Photo: Shirley Potter

One of my highlights has to be the girls that found the bird's nest fungi.

Take a look at Youtube to see how a raindrop spreads the tiny seeds from their 'nest' - it's very cool.



St Kentigern's girls asking 'what are these?'. Photo: Shirley Potter



Birds nest fungi. It is easy to see why they got their name. Photo: Shirley Potter

A dozen Air Force guys joined us for a morning and a group staying at the Christian camp also gave us a few helpful hours dealing with weeds. These groups are a valuable resource for us and we encourage their ongoing commitment.

Volunteers including Mark, Alison, Helen and me are the regulars of our volunteer Wednesday Weeders. There are a few others who come as they can. We value everyone's help, and especially love Alison's home baking (as did the fisherman's naughty labrador that polished off one of Alison's finest loaves!). It is a lot of fun listening to our crew talking to the plants, "here you go", "there's a bit of light for you", "hang on I'll give you a tie", "oh aren't you a beauty", "ah you'll be much happier now", "oh my goddess look at all those seedlings". The comments made to the weeds are mostly unprintable, but "get out and walk" is a common one!



The Wednesday weeders. Photo: Unknown photographer

Rosie Bennett is our main part timer, ably accompanied by her border collies, Lilly and Fox who have fun flushing out pheasants and sniffing out rats! Zoe is a newer member of our "staff" usually for one morning a week. Stu and Robin have done some fabulous work hedge trimming Japanese honeysuckle from existing natives. Helen's husband Jim is kindly making wooden signs for us.

Mark, Ardy, Collette, Sarah, Judith and many others are all instrumental in different aspects of this project. Releasing plants is our biggest ongoing challenge, Canadian fleabane is still a pain, with nightshade vying for second place. They grow to large plants in what seems only a few months. Hand pulling, with much grunting, is ensuring that most of our precious native seedlings nearby get some light and can survive. Ian and Frances Jenkins continue to come up trumps with 1000 beautiful trees for the season.

Pretty much all the large kowhai trees in our plantings have all come from them since 2014. Come along and visit the site named "Jenkins".

The plant lay out days have become a well attended day in themselves. Thanks to the valuable support with helpers coming from DOC, TDC, WRC, EPRO and of course our great volunteers.



Lay out day. Photo: Shirley Potter



Planting day smoko. *Photo: Shirley Potter*



The only 'dryish' access to our planting area. *Photo: Shirley Potter*

Our community planting days are well attended no matter what the weather throws at us, with new faces turning up each time. The last planting for the season was a tad over watered and access was challenging with only one way in from the fishing access - hardy locals were not bothered in the least! Neighbours Pauline and Paul ensure our planting day smoko and lunches run smoothly.

Bryan Lawrance as usual is key to this project without Bryan's machinery, expertise and passion this project would never have got off the ground. In areas where Bryan cannot get access to mulch (too many trees), we have left the dead weeds and made 'holes' in which to plant our natives. This method has been pretty successful and results in somewhat less weed growth due to less land disturbance, however it is not so friendly for volunteers working among dead blackberry on community planting days.

Nick Singers and I have been late to our spraying in preparation for our 2023 planting due to the wet summer. Getting Bryan's tractor into the site between



Shirley and Bryan clearing "Ardy's Frontier". *Photo: Mark Brightwell*
floods has been a bit of a nightmare, but he was finally finished in early June, perfect timing for our first planting.



Kayaking in "Lake Karapiro" which we plan to plant as a kahikatea forest. *Photo: Shirley Potter*



Warrick Simmonds and his crew have removed the last dead pines that could be felled without damaging native plants. The skyline is so much better for all their efforts. Warrick and his friends have been a key part of the project and we are very grateful for their mahi.

This year Nick spotted another two endemic grasses, *Poa anceps* (meadow grass) and *Lachnagrostis lyalli* (mountain wind grass), nice to have expert eyes on the job as they just look like grass to me!! Both will have their seeds collected and spread and they will not be sprayed in the future. We also have a single vine *Passiflora tetrandra*, (native long leaf passion vine), currently highlighted with pink tape to keep it safe!

The special (but unremarkable) bog yellow cress, (*Rorippa palustris*), found in 2021 has multiplied and is looking really good - another run on the board for our biodiversity.

Who have been seen near our last 2022 planting site and there have been multiple sightings upstream, which may bode well for a local population one day. We would love to extend our trapping upstream in the future, although it is a very difficult stretch of river to place traps due to frequent flooding.

Cyclone Gabrielle sadly took out a few old kowhai, kanuka and two large beech trees. Fortunately the damage was infinitesimal compared to that in the nearby pine forests. There have been a dozen or so possums come visiting (for a short stay) after being displaced from the pines, more possums than we have had in many years.



The fabulous plant growth from 2020 to 2023 is demonstrated in the three photos above. Plant growth at 'The Monument' - note the karamu are self sown. Photos: Shirley Potter

Lowlights

- Floods
- Losing land and plants to floods
- Several mature natives blown over in the Gabrielle storm
- Feral cat killing a Ruru
- Miromiro disappeared

Highlights

- No drought!
- Killing the feral cat that got the Ruru
- Toutouwai visited yet again
- Working alongside such a happy motivated group of people
- Successful seeding of native grasses and mistletoe
- Ribbonwood (Manatu) seedlings growing in our 2017 plantings
- Supplying corrections with thousands of self sown kanuka seedlings
- The outstanding plant growth this season

Thanks to all the other helpers not specifically mentioned, you know who you are and your help is valued.

EPRO - CELEBRATING 25 YEARS OF CONTROLLING PREDATORS



JANE STAFFORD

EPRO COMMUNITY LEAD

Epro, a family-owned predator control business based in Taupō, celebrated their 25th year in business in July 2023. The company is renowned throughout the country for providing a variety of predator control services to both private and public sector clients across New Zealand. Throughout the 25 years of operation, Epro has remained dedicated to delivering exceptional

customer service and specialised services, working tirelessly on the front lines of the fight to protect New Zealand's biodiversity through aerial and ground-based control and survey programmes.

Our team is passionate about preserving the environment and safeguarding New Zealand's endangered native wildlife. We strive to rejuvenate the native flora and fauna while also protecting our significant meat and dairy export industry by eliminating Bovine TB.

Our people design and deliver large landscape-scale projects that are restoring the native forests around the region, allowing our native birds to recover and thrive ...



Servicing a project by bike. Photo: EPRO



Landscape scale operation using helicopter 2 Sept 2022. Photo: EPRO

Epro has sought-after predator control expertise and can provide specialist technical advice, develop industry innovations, and participate in agricultural research. We recognise that quality and innovation are key drivers of business success along with the continuous development of highly skilled staff.

Being a sizable business in the industry, Epro takes pride in being a locally based company in Taupō. We are mindful of our contribution to the local economy and are grateful for the support received from various local businesses providing us with essential services.



Dead possums below an AT220. Photo: EPRO

We support numerous conservation groups, such as Predator Free Taupō, Opepe Reserve and Greening Taupō, and contribute regularly to youth initiatives, whether it is fundraising, sponsorship or apprenticeship employment. We have developed a family culture in the business and shared values which mean that when the terrain is tough, no matter the weather or how steep the hill, the work is done safely together.

We are honoured to have been involved in some considerable conservation projects over the years

and are following the subsequent success of breeding numbers in these areas year after year. The recent release of kiwi in Tongariro National Park is an exciting milestone. Our people design and deliver large landscape-scale projects that are restoring the native forests around the region, allowing our native birds to recover and thrive, as well as protecting the valuable forestry industry for local iwi-owned exotic forests. In the past two years alone, we have protected over 250,000 hectares of bush, forest and farms within one hour's drive of Taupō.

We have worked with OSPRI for over 25 years to eradicate bovine tuberculosis from much of the north and west of the Taupō region and more widely into the Taumarunui and Tongariro National Park regions. This mahi protects our farmers and valuable meat and dairy export markets. Epro is still working each day to eradicate TB from the Waipunga, Turangi, Central Plateau and Waitara Valley regions.

Several of the larger DOC-led landscape projects run by Epro have resulted in significant benefits for conservation. The Tongariro Forest Kiwi Sanctuary, in which we have completed aerial control programmes on three occasions in the past 20 years, has demonstrated the huge benefits of aerial 1080 delivery for kiwi chick survival. The long-running Hauhungaroa Range programme started for TB eradication in wildlife back in the 1990s has now extended into a biodiversity focus with the absence of TB and the healthier ngahere. The Rangitoto Range (Pureora North Block) is another success story for predator control with the flourishing kōkako populations that now reside there, following coordinated and regular predator programmes over



Attaching a bait station 16 May 2022. *Photo: EPRO*

many years. The maunga of Tongariro, Pihanga, Kakaramea, and the Umukarikari Range have all benefited from sustained programmes of control. A short walk around Lake Rotopounamu will help our community understand what that benefit looks like for bird life.

Taranaki Mounga is an ambitious project we have been involved in to protect Te Papakura o Taranaki,

previously known as Egmont National Park, from pests and to return diminished or lost native species over a 20-year timeframe. The project works with DOC and supports Towards Predator-Free Taranaki and the Taranaki Regional Council's development of a biodiversity halo to minimise pest reinvasion from around the park's surrounding 100km perimeter.

Epro is a service provider to the Tipu Mātoro National Wallaby Eradication Programme which helps stop the damaging spread of Dama wallabies from the Bay of Plenty into the Taupō region. A highly specialised carrot aerial application in July 2023 provided a buffer in the Kaingaroa Forest next to Rainbow Mountain, to eradicate wallabies which are currently spreading to the south and southeast of their established home range near the Rotorua lakes. We are also part of the project team working towards initiating a Predator Free project in the Puerto catchment. The aim there is to incorporate significant local areas for the ecological benefit and reintroduction of taonga bird species such as kiwi.



Epro's Andrew Buchanan showing how to set up animal gnaw monitoring lines at Opepe 5 Dec 20. *Photo: Harry Keys*

We collaborate closely with and provide guidance to local businesses and organisations, including Waikato Regional Council, Bay of Plenty Regional Council, Timberlands, and Contact Energy. Our goal is to create pest control programmes that safeguard nearby farms, forests and wetlands.



Setting up a cat trap. *Photo: EPRO*

We are a proud supporter of Greening Taupō and Kids Greening Taupō, alongside various other school initiatives. We provide financial assistance, pest control services, education and employee time and expertise, helping support our local community groups in any way they need. It is rewarding to see them thrive along with our community to build a district that stands together as kaitiaki of our native biodiversity for future generations to enjoy. We can support their learning by helping to educate and be part of environmental initiatives. By building relationships with our community, we hope to encourage work that gets more people into thinking about predator control in their backyard. We are happy to answer questions and provide advice when it comes to catching a pesky possum in town or even lending a game camera to a local daycare so the kids can see which animals visit late at night. This gives everyone a chance to ask any questions to help them better understand the importance of what a business like ours does.

During our work we get to see first-hand how predator control benefits the taonga in the ngahere and relates to the vision of Greening Taupō / Kids Greening Taupō and Predator Free Taupō. Our office is situated at the base of Mt Tauhara on Broadlands Road and we are minutes from our beautiful lake so we are surrounded by the possibility of a district where our native taonga can once again thrive.



Epro staff walking a GPS line to set up bait stations along a bushline. *Photo: EPRO*

Congratulations!

At the Unison Great Lake Taupō Business Awards 2023, EPRO not only took out the Excellence in Strategy and Planning award and the Excellence in Community Contribution award plus were Highly Commended in the Employer of the Year category, but were named BNZ Overall Business of the Year. That's a tremendous recognition for a company that puts so much into protecting our natural environment.

IN HIS OWN WORDS ...

Pat Sheridan's ranger life told largely in his own words



DAVE WAKELIN

EX NATIONAL PARK RANGER
AND DOC CONSERVATION
AWARENESS

Pat Sheridan died in July 2022 after a bout of cancer. In his final months he wrote a personal memoir of his life, including his time as a national park ranger and other conservation positions. His son, Brett, has kindly allowed me to use the memoir as a basis for this article.

Like many rangers of the 'old school', Pat's career was wide and varied. Here, in his own words he gives an inkling of life as a ranger in the 1960s through into this century.

Pat made the decision at seventeen that he wanted to become a national park ranger. Then there was only 23 or so throughout the country.

A new four year training scheme for potential National Park Rangers was about to be set up. After a casual interview in the corridor of the old wooden government building a train ticket to National Park was quickly organised. I was to work on a trial basis at Tongariro for three months and the remainder of the year at Urewera with a possible outcome of being seconded to the Forest Service Ranger Training Centres at Reefton and Rotorua for two years.

My outdoor adventures started as a budding National Park Ranger in 1963. Family sent me on my way with a heavy fruit cake wrapped in a tea towel.

On arrival at National Park he met his first ranger, Ian Blackmore.

He was a towering frame in shorts and boots, laid back and looking at peace with the surrounding mountains and forests. Leaning against the Land Rover at the National



Ranger Ian Blackmore on Mt Ruapehu. Photo: Pat Sheridan

Park rail station he grabbed my pack and flung it on the back deck. He had a calm knowledgeable country drawl. No hurry mate. So, this is how a ranger is supposed to look and speak. Ian Blackmore was one of five rangers at Tongariro. There were then only 23 in nine National Parks. I was joining a small club. And a friendly one. I lived and worked with Ian for the next three months learning to become a ranger.



Accommodation lodge at Whakapapa where I stayed with Ian. Note the ambulance. Photo: Pat Sheridan

Ian was friendly and loved to stop and talk to visitors and share his knowledge. Maybe this was part of being a ranger?

John Mazey, then chief ranger, wrote,

"I well remember Pat arriving at Tongariro National Park wearing a pair of what, in those days, were known as winklepicker shoes with their sharp pointed toes. It looked as though a teddy boy had arrived to the conservative rangers".

It was a friendly supportive atmosphere amongst the staff and families at Tongariro. I was surrounded by pleasantness and concern for this 17 year old recruit. Muddy staff boots mixed in with family footwear at the door entrances. John's wife Elizabeth topped me up with adequate warm clothing and kitchen tools. She was so kind and helpful.

My spindly school body buckled under the weight of carrying railway sleepers on the Taranaki Falls track. And the skin wore thin on my finger tips from laying stone and cement paths around the new Whakapapa Visitor Centre. I was also attracted to the variety of tasks done by a ranger. Cutting tracks, painting buildings, making signs, repairing fences, and making new box splints for the ski patrol rescue packs, or guiding visitors on the many walks.

Urewera National Park

From Tongariro Pat was sent over to Urewera National Park, where life was fairly primitive.

I was plonked down by a bus in the middle of the North Islands largest native forest. Barry Sturm walked down from the ranger's cottage at Aniwaniwa to greet me. He was the first ranger at Urewera and had been there about a year. He took me to a nearby run down draughty leaking building and said this will be your home. Possums had been living in it.

Wally Sander came over from Mount Taranaki, to replace Barry, and the pace picked up to establish the park.



1963 My first signs I made. For the Ngamoko track. I was involved with the planning, designing and making of signs spanning over 40 years. Photo: Pat Sheridan

We spent many hours in those initial months establishing and improving our living conditions. The generator frequently broke down, windfalls damaged the telephone line, the water pump was temperamental and we were always on the lookout for dry firewood.

The noisy kaka and following bush robin and fantails were my only companions while I cut the local tracks alone.

The new Urewera National Park Board took control and changed the emphasis quickly. They had an early vision to form a track around the lake and started by constructing two 18 bunk huts at Waipoua and Marauiti.

The Forest Service 1964 and 65.

Before there was a training course specifically for national park and reserves rangers the only option was the established Forest Service training school.

I was bundled off to the Forest Service for two years with intentions to shape me into a useful end product for National Parks.



Forest Ranger School 1964. Pat is third from left on front row. Photo: Pat Sheridan

I joined 25 other lads at the ranger school (in Reefton). It was a well organised training establishment using the buildings of a previous mining school. Our time was split between field work and inside learning. We studied geology, soils, climate patterns, surveying, and native plants - including measuring the potential quantity of millable timber in an area

Onto the Rotorua Ranger school where the emphasis changed to learning the skills of managing large production pine forests. The learning topics such as pine tree silviculture and logging were not exactly relevant for a national park ranger.

Somebody thought it was ironic that a national park ranger was planting contorta, so he took a photo of me planting trees and then made sure it appeared in the local newspaper.

Mt Cook

The rangers were experienced and were supported in the summer with a team of six or so skilled climbers, normally



Pat, planting *Pinus contorta* while with the Ranger Training School.
Photo: Pat Sheridan

university students, to help with mountain guiding and search and rescue.

A fall on the Copland Pass and a broken arm pushed aside any mountaineering dreams I may have had.



Pat, with Mike Crozier, being rescued after the fall. It took all day for the rescue team to get us off the mountain. Photo: Pat Sheridan

Tongariro again 1966-72

John Mazey at Tongariro offered me a temporary office and reception job at the Visitor Centre while my arm was in plaster following my accident at Mt Cook. I worked there as a ranger for periods adding up to four years, ending in 1972

We ran ski patrol, erected safety fences and signage, provided shelters, ran an ambulance service to the



1976 preparing foundations for the Glacier Knob Shelter 700m north of the Crater Lake. It's primary purpose was to house volcanic warning equipment away from the Crater Lake.
Photo: Pat Sheridan



1972 Tongariro Rangers. From Left Back: John Mazey, Pete Fletcher,, Bruce Jefferies, and Bill Cooper. Front from Left: Bill Hislop, Pat, Jackie Fleet, John Newton, and Barry Pearson.
Photo: Tongariro National Park

hospital, controlled car parking, and oversaw community services such as sewage, rubbish disposal, plus electricity and telephone distribution. We ran a summer programme for three weeks each year. This involved walking parties daily up to the crater lake, Ngauruhoe, the Tongariro Crossing, or shorter trips, plus giving evening slide talks in the visitor centre.

We worked a six day week including the weekends when there were more visitors in the park. We had a sense of satisfaction and pride from working for the conservation cause. Coping with the extremities that the mountains threw at us also tested our resilience. It was a fond attachment or maybe even a degree of possessiveness we had towards our National Parks.

John Mazey was a strong leader and was to the fore in ranger training in New Zealand. I was fortunate to be influenced by his professional and methodical approach to his work plus the emphasis he placed on treating park visitors as customers and encouraging our association with the Tangata Whenua, Ngati Tūwharetoa. He was strong on rangers knowing their land and heritage values.

It was a fruitful time for the rangers setting up new families amidst the mountains with the Mazey, Cooper, Jefferies, Clay, Blount and Mossman families. Our work team dynamics were strong.

It was satisfying to be involved in the initial planning and construction of the visitor facilities in the Mt Pihanga and Lake Rotoponamu area. I supervised a team of prisoners cutting and forming a track between the new Saddle Road and the Lake. It was a good outcome and the track is now one of the more popular in the Park.



Fiordland 1969

We were in the process of opening up the Milford Track to freedom walkers which required a production line of huts to be built. I was fortunate to cram in a lot of new and exciting experiences into a summer based at Te Anau in 1969.

We constructed an A-frame shelter on the McKinnon pass, the highest point on the Milford Track. The previous one was destroyed by a snow avalanche in the preceding winter. Most of the timber frame work was cut to size and flown in by helicopter. The pilot, Bill Black was a local legend.

Waitangi National Reserve

February 6th 1973. This was Norman Kirk's first Waitangi Day as Prime Minister and mine as Manager of the Waitangi National Trust. He commenced the momentum for considerable change and I was part of the team involved for three years at rearranging the visitor outlay, restoring the Treaty House and adding a visitor centre to the visitor experience.

I did find it incredible on my arrival to see the Union Jack flying at the top of the flagstaff and the New Zealand flag below it. I was relieved that the order of the flags was reversed after the ceremony of our first New Zealand Day in 1974.

Prior to my involvement at Waitangi the Board had given approval to the Golf Club to construct a new club house at a commanding viewing point within the reserve. Its overall prominence would have overshadowed the heritage values of the reserve. Fortunately Don Millar, who was a planner within the Lands and Survey, had similar views. Over several months he negotiated and coerced to swap some land and build on a site that suited all parties.

1976 Mt Taranaki

A mountain boy at heart, I took charge at Mount Taranaki. It had a cobweb of parochial committees, which were no longer relevant.

How to redirect the regional enthusiasm to a greater good was going to be a challenge. I also wanted to change the design of the already approved North Egmont visitor centre to be in keeping with the site and improve its visitor functions. I asked architect Harry Turbott, who I worked with at Waitangi, to influence these changes. It happened quickly after a visit by Harry. The consultative approach I learnt at Waitangi resulted in a good outcome.

There was such a variance in the ranger standards and consequently the boards looked upon the rangers differently. In the case of Egmont a ranger was regarded more as a caretaker rather than a manager.

Peru

Pat, like a number of rangers, went on a posting to an overseas country to help with planning, training and giving conservation advice. In Pat's case he spent three years in Peru, setting up conservation units and improving field management. Looking back, Pat said:

The training and encouragement - often in hopeless circumstances - by myself and two of my colleagues, had paid off. They had progressed their way into management positions. Some of the past management staff moved onto senior international level roles with non-government conservation organisations. Facilities had improved from the original signs, display panels, tracks, guard posts, and picnics and visitor facilities - some of which were still well maintained. We left a favourable and notable impression on the earlier management of Peru's conservation areas.

Back in New Zealand

Back home Pat enjoyed a spell as a District Ranger in charge of operations in the lower North Island. During this time he noted John and Kathy Ombler's early foundation work to give National Park status to the Wanganui River, probably done several years before anticipated.

He left, in 1982 to run a 10 acre orchard on the outskirts of Havelock North, with varied success.

He spent a spell in Malaysia on a World Bank funded project to protect the Rhino habitat from the insidious growth of palm oil production.

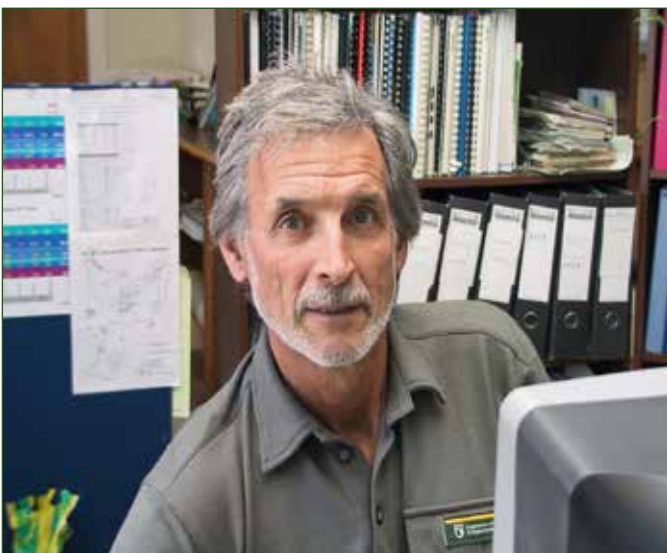
Hawkes Bay

Eventually my DOC contracts grew into a permanent position managing recreation in Hawke's Bay. This was post Cave Creek which resulted in vast improvements being made to huts, tracks and structures. Consequently I enjoyed initiating new projects and being active throughout the Ruahine and Kaweka hills and working with like-minded people.

The last word

Working amongst our best natural landscapes and for the conservation cause, I developed a wide appreciation of our natural world. My attitudes were made there. It was my home. My then hobbies of photography, tramping, botany, heritage appreciation, and active conservation were an extension of my work environment.

The people I worked with loved their job and liked helping people, so, to be on the same wave link was great. I appreciated the influence and support from mentors, Ray Cleland, John Mazey, Wally Sander, plus Don Millar at Waitangi. In many ways I was youthful in man sized positions and may have had a look of desperation



Pat at his desk in Hawkes Bay. Photo: Pat Sheridan



Pat got back into serious cycling in his latter years. His son Brett commented that eight months before he died he was cycling 100km a day. Photo: Pat Sheridan

about me. They were supportive and their long-standing conservation goals were contagious.

Special experiences include: relieving on Kapiti Island with family; noisy birds on Codfish Island; a six day cruise of the Galápagos Islands with Brett and overnighing alone at Macchu Pichu with my family. We did things then which were not so common and it was less crowded.

My involvement and concerns with environmental issues ... have ranged from the siltation of the Bay of Islands to the restoration of the Ahuriri Estuary and more recently to the potential subdivision of my boy playground - Shelley Bay on the Miramar Peninsula. Encourage, support and advocacy best describes my input.

We are guests of this nature. There are remaining challenges. The bareness and silence of our forests is sad.

I will say it again. I am thankful. I had a fortunate life.



Toutouwai, North Island Native Robin

KIDS GREENING TAUPŌ 2023



RACHEL THOMPSON

KIDS GREENING TAUPŌ LEAD
EDUCATION COORDINATOR

It has been another busy year for Kids Greening Taupō (KGT). We continue to engage tamariki in the restoration work of Greening Taupō and Predator Free Taupō, using this conservation work as an authentic learning context. Our student leadership team continues to have over 100 students who lead a number of environmental projects around town.



All flouro jacketed and ready to go!

This year we have been very lucky to receive funding for the first time from the Ministry of Education. This funding is for the next 3.5 years and is an acknowledgement of the support that we give schools to enrich their local curriculum. Along with continued funding from Bay Trust and Contact Energy, it has allowed us to employ two qualified and experienced teachers and a kairuruku reo Māori. Benoir Midwood-Murray has taken on this role in 2023, working with kura kaupapa and kohanga reo, as well as advising us on cultural matters and helping to develop our te reo Māori resources.

Our programme continues to expand and adapt to the needs of the community. This year, schools are implementing the first subject of the new Aotearoa



Coordinators Rachel and Heidi at Greening Taupō Day 2023



Kairuruku reo Māori, Benoir Midwood Murray, opens Greening Taupō Day 2023

New Zealand Histories Curriculum. Our work fits nicely within this curriculum. Our coordinators have enjoyed expanding their own knowledge to be able to teach the history of biodiversity in Aotearoa. All the mahi we do - removing introduced plants, trapping introduced predators, and planting habitats for native species - is done to restore what has been lost because of the actions of people in the past. We have created a slideshow and a kit of hands-on experiments to show the importance of wetlands.

When people understand how our unique native species evolved the way they did due to having only avian predators, they can see why introduced mammalian predators are so devastating to our biodiversity, and why predator control is needed. When they understand the impact of forest clearance and wetland removal, they can see why we need to plant native plants. With this understanding of our history, our students can see what needs to be



Tauhara Primary School students learn about introduced predators



Wetland experiments with Tauhara Primary Students at the Water Expo



Hilltop School students decided to build traps and set a trapline after our presentation. They caught a rat on the first night, even though they hadn't put bait in the trap yet!

done to create a better future. So 2023 has seen us spending time in classrooms educating tamariki and teachers about this history and inspiring them to take action to improve our local environment.

This year, schools are implementing the first subject of the new Aotearoa New Zealand Histories Curriculum. Our work fits nicely within this curriculum.

The 2023 Greening Taupō Day art competition went out to every student in Taupō alongside teaching resources that we put together. It asked students to draw what Aotearoa looked like when the first humans arrived on its shores. We were amazed with the quality of the artwork produced. It was evident that teachers and students had been learning about our biodiversity and endemic species. Planting season is now in full swing and the students are keen to help restore biodiversity in Taupō through planting native forests and setting traplines.



Art competition entry by Willow and Amelia from Hilltop School

We undertook our first biological control project with St Patrick's School Taupō this year. With the support of Waikato Regional Council and Waikato Enviroschools, we transferred tradescantia beetles from Maeroa Intermediate in Hamilton to Brentwood Gully in Taupō. We will need to wait until summer to see if this has been successful and if the beetles survive our cold winter. The students learned a lot through this project and were very passionate about controlling the weed taking over their gully. Thank you to Benoir, our new kairuruku reo Māori, for advising us on the cultural implications of moving species



Our coordinator, Rachel, catches beetles at Maeroa Intermediate with Waikato Regional Council and Waikato EnviroSchools

from one rohe to another. It has been a good learning experience for us, and we will be using this knowledge for any future biological control projects.

Partnerships with local businesses continue to help our resource bank grow. Mitre 10 Mega Taupō generously continues to provide gloves, tools and other resources for our programme. Epro Ltd have given us two new resources for our team: Polly the taxidermied possum (caught by students in the Wairakei School gully) and Harry the taxidermied hedgehog. They both lead to great discussions at



A Maeroa student with the 'pooter' that he made to catch the beetles. You just line it up with a beetle and suck on the straw!

schools and events. A partnership with NZ Forest Managers has allowed for native seedling collection under pine forests to become part of our programme.

Thanks to funding from Contact Energy, The Possum Trail Run and First Credit Union, we were able to plant regularly with our local schools and kindergartens, getting thousands of native plants in the ground.



Benoir performing a karakia and welcome for the beetles with St Patrick's School students

Many of the plants went into school restoration projects on-site, or into neighbouring parks and gullies, but some went to special projects such as St Patrick's School and Waipahihi School's Māra Hauora (wellness gardens), which were filled with native plants traditionally used for medicine or wellbeing. Every school/ECE centre planting was designed especially for their site with input from the tamariki. Plants were chosen especially for each one. We planted tussock and tangly shrubs for lizards' habitat, putaputawēta for puriri moths, flowering natives for our native pollinators, native berries as food for



Jane and Kane Stafford from Epro with Polly the taxidermied possum

geckos and birds, ferns and podocarps in areas with canopy cover, and ground covers in small gardens. The range of plants that we planted in the past year was the most diverse that it has ever been. Many of the schools had students design signs for the areas. These were printed onto outdoor signage material by Quality Print, another fantastic local business that provides lots of support.

Relationships with businesses and organisations have allowed us lots of wonderful opportunities in the past year. Hundreds of our students have had kiwi tours at the Crombie Lockwood Kiwi Burrow thanks to Kiwi Contact. We have been able to collaborate with a range of experts such as Ruud Kleinpaste (The Bug Man) and Sam the Trapman through a relationship with Field-Based STEM. Local artist Sue Graham has run



Tauhara Primary Students with their lizard garden 'The Mokomoko Motorcamp'



Waipahihi School student leaders receive a prize from Contact Energy and Plants from First Credit Union

nature art workshops for us and our students have taken part in NZOIA (New Zealand Outdoor Instructors Association) courses. Trees for Survival are working with us for the first time this year at St Patrick's School. Taupō Intermediate gully project is well underway and, thanks to Camex engineers and local landscape architect, Herwi Scheltus, it is transforming into an amazing outdoor classroom space.

Collaboration is key to everything that KGT does and this huge support network is never as obvious as it is at Greening Taupō Day. The number of activities provided by local businesses and organisations for the thousands of people who come along has been



Sam the Trapman with a group of Hilltop School students at Opepe



Kids Greening Taupō student leaders visit the Crombie Lockwood Kiwi Burrow with the Kiwi Contact programme incredible to see. We feel truly lucky to have so many supporters in the community. We would not be able to do the work we do without them.

Thank you to everyone who has supported Kids Greening Taupō in some way over the past year. You have all contributed to the ongoing success and growth of our programme. We look forward to seeing what the next year has in store for us!

KIWI CONTACT: EMPOWERING ENVIRONMENTAL EDUCATION IN TAUPŌ DISTRICT



HEIDI PRITCHARD

KIDS GREENING TAUPŌ
COORDINATOR

The Kiwi Contact programme, a collaborative effort between Save the Kiwi, Contact Energy, and Wairakei Golf + Sanctuary, in partnership with Kids Greening Taupō (KGT) and with the support of the Department of Conservation, aims to deliver a local environmental education initiative in the Taupō District. Its primary focus is to provide unique learning experiences for local students concerning kiwi conservation.



KGT Student Leaders with Heidi Pritchard KGT Coordinator participate in the Kiwi Contact programme
Photo: Rachel Thompson

Collaborating closely with Kids Greening Taupō, the Kiwi Contact programme grants priority to KGT Student Leaders to attend the tours. However, numerous other students from various schools, including Te Kura Kuapapa Māori o Whakarewa I te reo ki Tūwharetoa, Taupō Primary, Tauhara Primary, Taupō Intermediate, St Patrick's Catholic School, Hilltop School, Mountview School, and Waipāhīhī-a-Tia School, participate as well. During the 2022-2023 kiwi hatching season, The Wairakei Golf + Sanctuary



KGT Student Leaders enter through the Predator Proof fence.
Photo: Rachel Thompson

welcomed 200 students ranging from year 4 to year 13 from the Taupō rohe within its predator-proof fence to visit the Crombie Lockwood Kiwi Burrow



KGT Student Leaders have a close up look at a real kiwi egg.
Photo: Heidi Pritchard



KGT Student Leaders take notes to write a kiwi conservation report. *Photo: Heidi Pritchard*

running the Operation Nest Egg programme. Knowledgeable kiwi conservation experts from Save the Kiwi allowed the students to witness the care and preservation of kiwi eggs and chicks. The students experienced first-hand the range of colours from blown kiwi eggs.

An imitation egg accurately replicates the actual weight of a kiwi egg.

For many of the students, the most memorable part of the tour is seeing the kiwi up close, without any barriers between them, closely followed by witnessing the candling of a kiwi egg. In addition, they gain insights into the importance of biodiversity and predator control by learning about other endemic birds such as the takahē (which some tours were fortunate enough to spot) and huia.

The impact of the Kiwi Contact programme even extends beyond the local community; a journalist from National Geographic magazine attended one of the KGT Student Leader tours. Captivated by the programme, he plans to mention it in an upcoming article on kiwi conservation, further raising awareness



KGT Student Leaders listen to stories about other Aotearoa/New Zealand's unique native birds. *Photo: Rachel Thompson*



A first look at a baby kiwi chick by the KGT Student Leaders. *Photo: Heidi Pritchard*

of this remarkable initiative. The Kiwi Contact programme continues to be highly successful and appreciated by the teachers and students of the Taupō rohe. Many students have shared their experiences through reports or in their school newsletters, while others are delving deeper into kiwi research. By participating in the programme, students gain a profound understanding of their cultural heritage, the conservation efforts dedicated to preserving the kiwi species, and the importance of safeguarding Aotearoa/New Zealand's unique biodiversity.

GREENING TAUPŌ 2023



ROBYN ELLIS

GREENING TAUPŌ
COORDINATOR

This year we hit a huge milestone. We celebrated 10 years of Greening Taupō! We're blown away by the amount of continued support we receive from local businesses, organisations and the community. It is incredible to see our growth and the positive impact we're making together.

Greening initiatives bring numerous benefits far beyond enhancing the appearance of urban areas. They increase native biodiversity, prevent soil erosion, improve the air quality, health, comfort, and well-being of the community and much more. Today, there is a wealth of evidence that highlights the importance and benefits of greening initiatives and urban green spaces. Early initiatives, such as the Green Seattle Partnership established in 2004 and the Hamilton Gully Restoration Project established in 2001, got local ecologists thinking about how something similar could be replicated in Taupō. As people became more aware of the benefits of improving the environment, projects like Greening Taupō were born.

In 2009, Wairakei Golf Course owner Gary Lane constructed a predator-proof fence around the course, encompassing approximately 180 hectares, to create a unique experience where golfers can experience New Zealand's wildlife. Inside the Sanctuary, with the exception of mice, all mammalian pests were eradicated in 2010. The Sanctuary undertook extensive indigenous forest restoration to enhance habitat for native birds. From there, the concept for Greening Taupō arose from a discussion between Wairakei Golf & Sanctuary, the Department of Conservation and Project Tongariro. Their combined vision was to expand the conservation efforts beyond the Sanctuary and create a network of native plant corridors for birds to thrive in. To further develop the Greening Taupō concept and collate an action plan, local botanical expert and conservation advocate Nicholas Singers was contracted



by Project Tongariro, with funds received from the Wairakei International Golf Course Pro-Am Charity Golf Competition, to write an initial scoping study. Through this study, Nick laid the strategic foundation of the organisation, including long-term objectives and methodology. The fact that having large areas planted around Taupō with community engagement would have significant environmental, economic, and social benefits led to Greening Taupō's clear mission "to improve the Taupō environment for people and native wildlife through restoration planting and pest control.

This restoration work also greatly supports Greening Taupō's champion Shawn Vennell with his passion for improving Wairakei Drive

The consultation process identified that there was considerable support from the wider community to re-vegetate areas. Organisations such as Taupō District Council, Waikato Regional Council, DOC, Tūwharetoa Māori Trust Board, and Mercury Energy, all long-standing partners since our inception, provided industry support and advice.

On Saturday 1 June 2013, Greening Taupō held its first-ever community planting event. This was the official launch of Greening Taupō; 300 people came along to help plant 3,000 native plants provided by Contact Energy. Ten years later, on Saturday 17 June 2023, Greening Taupō held its 10th annual community



Above: Nicolas Singers and his daughter Zoe planting at the Greening Taupō launch in 2013. *Photo: Contact Energy*

Right: The 2023 10 year celebration: Greening Taupō community planting with Contact Energy, celebrating 10 years *Photos: Robyn Ellis*

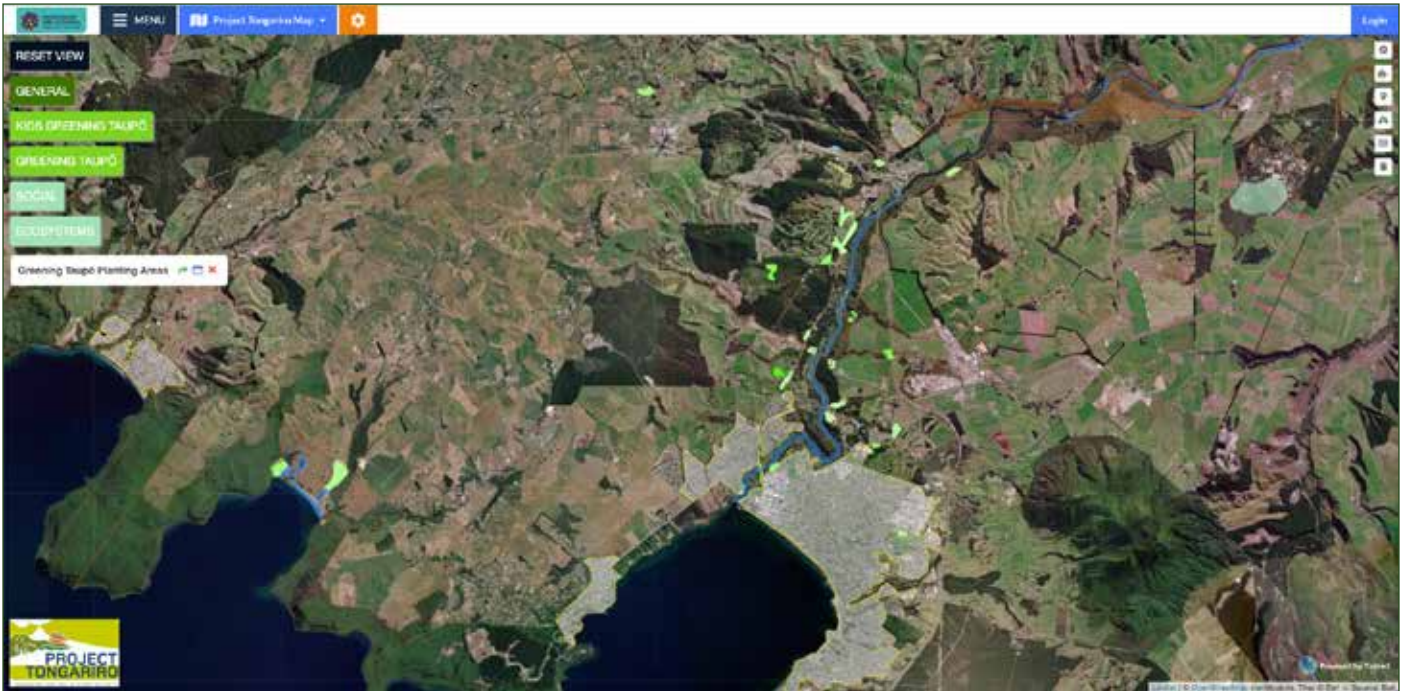


planting with Contact Energy; 170 volunteers joined in the celebration and helped plant 2,000 native plants, helping to restore another section of Wairakei Drive, and to, of course, eat cake!

We are so grateful for our long-term relationship with Contact Energy. In total, over 1,000 volunteers have helped plant 25,000 natives as part of the Greening Taupō and Contact Energy community planting events. These plantings have been focused on Wairakei Drive, which has not only improved the ecological corridors for native biodiversity from the Wairakei Golf & Sanctuary, but also helped create a sense of arrival into Taupō along the Drive. This restoration work also greatly supports Greening Taupō's champion Shawn Vennell with his passion for improving Wairakei Drive.

Over the past 10 years, the community has helped Greening Taupō to plant over 200,000 native plants since 2013 at community planting days. With support from Environmental Hubs Aotearoa, we have now mapped out these sites and calculated that we have successfully planted a total of 45 hectares of land. This achievement is truly remarkable. Hundreds of thousands of additional plants have also been planted within the Greening Taupō area by local and regional





Top: Environmental Hubs Aotearoa mapping of Greening Taupō restoration sites - powered by Takiwā
Above: Community planting event on Centennial Drive.
Photo: Robyn Ellis

councils and businesses (including Wairakei Golf & Sanctuary and Contact Energy). Collectively, all these plantings are joining the dots to create ecological corridors for native wildlife.

We continue to plan and host 10 community planting events each year, with 25,000 native plants going into restoration projects over the last 12 months. We also continue to plant at Centennial Drive, Taupō Golf Club, Hipapatua, Whakaipō Bay and Crown Park (our annual Arbor Day planting site). Our planting events would regularly have 100 volunteers turn up, but with the

growth of Kids Greening Taupō encouraging more and more students and their whānau to get involved, the number of volunteers attending the planting days just keeps increasing. The 2023 planting season is looking like Greening Taupō's biggest ever.

A total of 14,000+ volunteers have attended our community plantings over the past 10 years. This does not include the many hours of dedication from the Wicked Weeders and other passionate supporters such as Shawn Vennell, who continue to prepare and maintain planting sites.

Greening Taupō also provides volunteering opportunities for local businesses and organisations that want to get their staff involved in our restoration



Top to bottom: Wicked Weeders enjoy afternoon tea at Hipapatua. Community planting event on Centennial Drive. Fun muddy planting times at Whakaipō Bay. Kids Greening Taupō student leaders with the Greening Taupō supporters board. *Photos: Robyn Ellis*

projects. We regularly host Pathways students, and the Huka Lodge gardeners love mucking in; even the military recently returned to battle some blackberry for us. Due to COVID-19 restrictions, these opportunities were limited for several years, but it is good to see support returning.

We look forward to another action-packed decade with plenty more native trees going into the ground which will continue to improve the local environment for people and native wildlife.

Greening Taupō has only been able to undertake all this amazing mahi with the fantastic support of our funders, partners, supporters and volunteers. A big thank you to all!

PREDATOR FREE TAUPŌ 2023



ROBYN ELLIS

PREDATOR FREE TAUPŌ
COORDINATOR

Predator Free Taupō (PFT) continues to support the local community by trapping pests including rats, stoats, and possums, along with providing trap-building workshops at markets, events and schools.

PFT was at the Tūrangi town centre market for Conservation Week in September 2022, and Omori Kuratau Market for Labour Weekend the same year; we were so popular they invited us back for their Easter Market this year as well. Our stall at the Greening Taupō Day event had fantastic support from Taupō Forest and Bird and we even ventured to Ohakune to support the newly established Ohakune Predator Free Team at the Carrot Carnival in June.

Unfortunately, the Tokaanu trap-building workshop was cancelled due to poor weather, but we hope to have it rescheduled for summer.

The trap-building workshops are always very popular with kids and adults, and it's great to hear from people attending these workshops that more and more people are becoming aware of Predator Free 2050 and are keen to do their bit. Taupō ITM continues to support these workshops by providing trap box timber and nails, usually free of charge.

It has also been fun this year working with Kids Greening Taupō and assisting them with their mahi. This has involved undertaking monitoring with tracking tunnels, discussing pests, and constructing trap boxes with students at schools and with student leaders at Spa Park. Great enthusiasm and eagerness to catch rats has been shown.

Community trapping projects such as Opepe, Kinloch and the Waikato River Corridor have grown into independent groups that are successfully applying for funding for resources and recruiting volunteers.



Above: Turangi trap-building workshop.

Below: Success along one of the local community trap lines.

Photos: Robin Ellis



They are constantly expanding their trapping network and catching more pests. Opepe now has 332 traps and has caught 5600 pests; Kinloch has over 200 traps and has trapped 3500 pests. The Waikato River Corridor has 344 traps and has now trapped a whopping 7,000 pests.

It is wonderful to see Kinloch now has a dedicated team supporting backyard trapping and is collating a trap library to share



Above: Omori Kuratau trap-building workshop.

Below: Student leaders Pipi and Lizzie help out at Greening Taupō Day 2023. *Photos: Robin Ellis*



with the Kinloch locals. They share knowledge and information on their Facebook page. The Kinloch trap-building workshop held in the July school holidays was as popular as ever; a talented local knitter provided a collection of knitted pest animals for these workshops.

Individuals and small community groups continue to service a collection of traps throughout a network of urban gullies and reserves, alongside walkways and tracks, all helping to protect our local native biodiversity.

Monitoring continues on Mt Tauhara, with tracking tunnel monitoring being undertaken in November 2022 and March 2023. We could not do this important monitoring without the awesome support from Epro Ltd, Arco, Contact Energy, Call of the Wild and Waikato Regional Council who provide staff support and funds for the resources.

Footprint monitoring, chew cards, and trail camera footage were collected over five days during each monitoring session. Lots of pesty activity was identified on the maunga; learning and time were

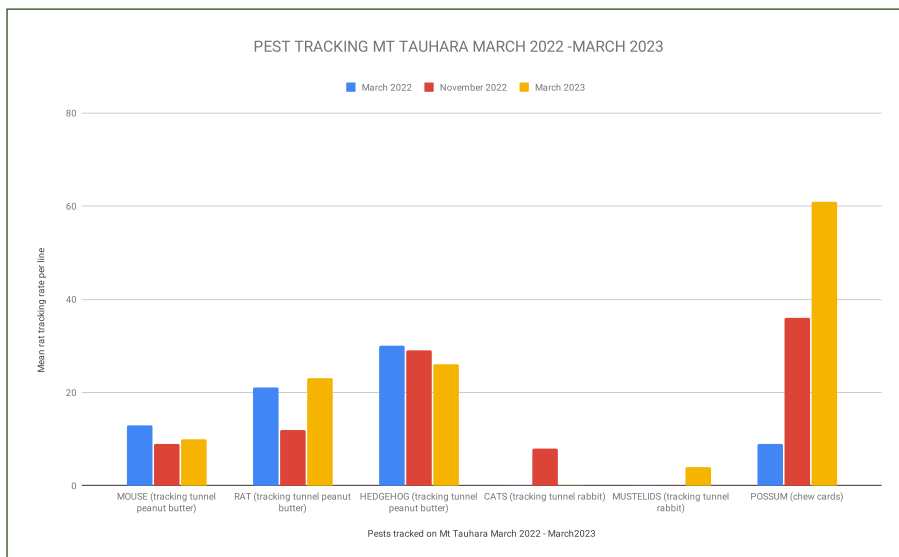


These photos were taken by the trail cameras on Mt Tauhara while doing the tracking tunnels. Clockwise from top left: possums, deer, pigs, cat, deer.

collection of mice, rats hedgehogs and possum prints and chews, cat prints were picked up and captured on the trail cameras at numerous locations over the maunga, along with footage of deer and pigs. No cats were picked up during the March monitoring, but the first mustelid print was identified. Pest monitoring will continue.

required to read the prints and chew marks. The benefits of trail cameras are evident. During the November 2022 monitoring period, in addition to a

Predator Free Taupō continues to be a part of discussions involving the East Taupō large-scale pest control collective. A Draft Pest Management Pilot Plan was presented to the collective by Cam Speedy.



This winter, the plan is for monitoring to occur in the Significant Natural Area (SNA) Pueto area, as well as some ground control on those lands that already have a pest control programme underway (Wairakei and Timberlands). Opepe Farm Trust and the Tauhara Land Trust have also expressed interest in this project. It is exciting to see the areas between Opepe and Tauhara are keen to be involved. Still a lot of conversations to be had, but good progress to date.

In the meantime, keep your lure fresh, your trap set and happy trapping!!

WILDING CONIFER MANAGEMENT 2021-2023



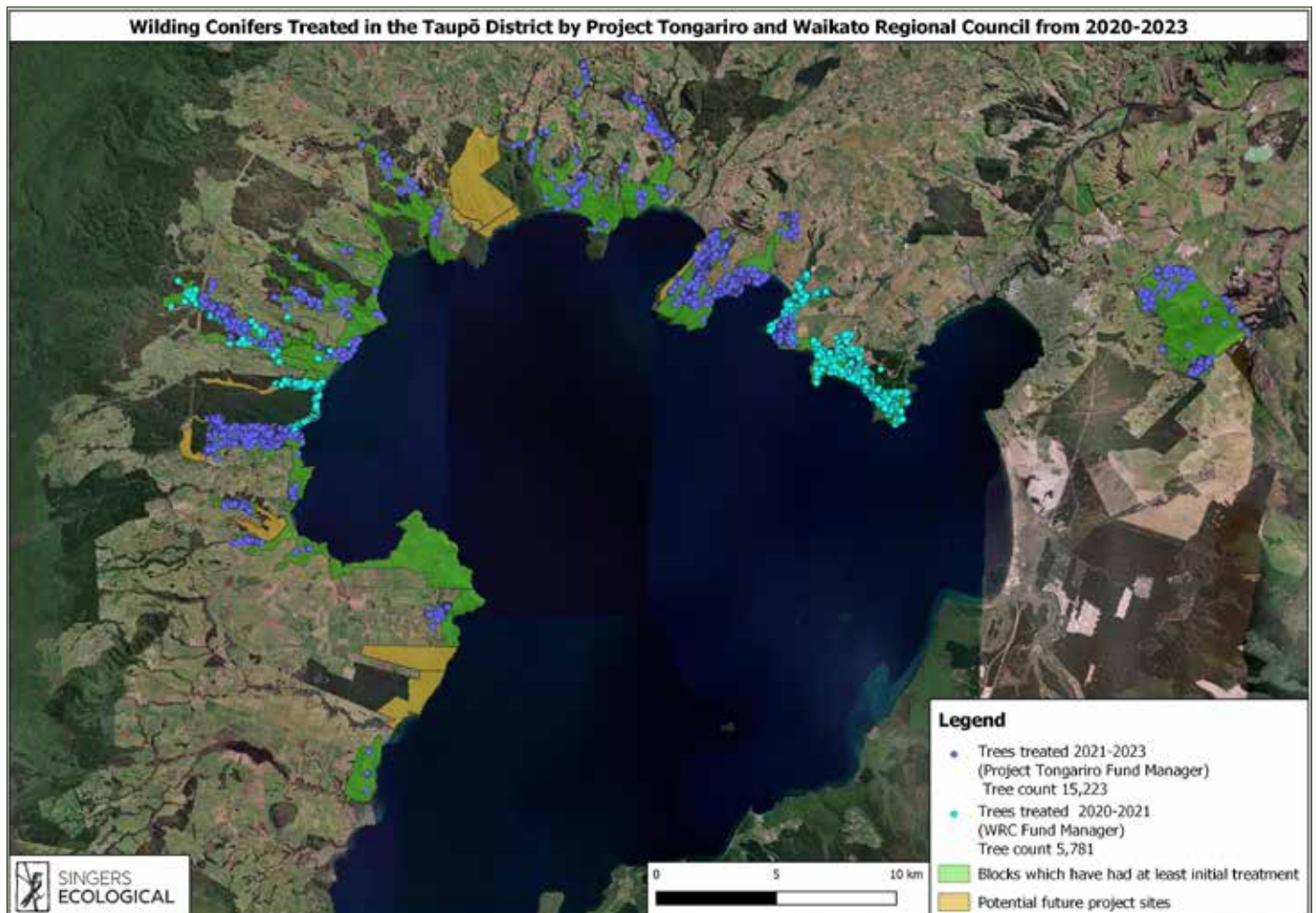
ALANA DELICH AND
NICHOLAS SINGERS

SINGERS
ECOLOGICAL

Wilding conifers are large introduced trees which invade natural areas. They are particularly invasive in successional forests and other open habitats such as forest margins, rocky areas, and cliffs. The most common species in the Project Area are radiata pine (*Pinus radiata*), maritime pine (*P. pinaster*) and Douglas fir (*Pseudotsuga menziesii*). Lesser common species found and controlled include lodge-pole pine

(*P. contorta*) and Bishop pine (*Pinus muricata*). These wilding conifers have spread into the successional forest communities of the Lake Taupō Reserves and Mount Tauhara from neighbouring land or shelterbelts planted on the margins of the reserves. Without control they have the capacity to dominate forest successions to the detriment of many native species. Aesthetically they spoil the appearance of natural areas.

Project Tongariro and Singers Ecological have led the removal of wilding conifers from three large sites in the Taupō District over the 2021–2022 and 2022–2023 financial years, with funding from the MPI community Partnership Projects fund which is part of the NZ wilding conifer control strategy (2015–2030), and the Lotteries Nature and Heritage fund. The three sites are Tauhara Maunga, the Western Taupō Bays, and the Northern Taupō Bays.



Overview of wilding conifers controlled from 2020 to June 2023 in the Taupō District.

Works from the 2020–2021 financial year, that were funded by the MPI community-led projects fund, with Waikato Regional Council (WRC) acting as the fund manager, are also included in this report, as these were the initial projects which Project Tongariro built on in the following two years.

The work has been made possible through the commitment to biodiversity restoration made by multiple partners who have endorsed the programme and put their trust in Project Tongariro to undertake the work. Our partners include Māori land trusts: Tauhara Maunga Trust, Rangatira Point Incorporated, Rangatira 8B1, Whakaipō 1D, Waihaha Māori Reservation, Whakarawa Trusts. We also acknowledge the hapū of Te Kapa o te Rangiita, Mōkai, and Ngati Tarakaiahi for their support of the project. We thank the Department of Conservation for enabling this work to occur on public conservation land, and Manulife Forest Management to include funding to treat wilding conifers on land adjacent to the Waikino and Waihaha Scenic Reserves.

This work would not have been possible without the work of our local environmental contracting firms based in Taupō and Tūrangi: ARCO Environmental Contractors Ltd., Marshall Eco Ltd., and Te Waa Logging Ltd. Wilding conifer control is physically demanding work, with large distances travelled usually on foot carrying heavy equipment. We acknowledge the tremendous commitment these contractors have put into protecting and enhancing the local environment.

Project Tongariro has financially managed \$453,500 of funding for wilding conifer management in the 2021/22 to 2022/23 financial years; and Waikato Regional Council financially managed \$408,424 of funding for wilding conifer management in the 2020/21 financial year. With these funds 21,559 wilding conifers have been managed over 8,518 Ha. (Photos above)



Photos of managed wilding conifers (northern C blocks), with significant geothermal vegetation at Tauhara Middle block in foreground. *Photo: Nicki Hughes. May 2023*



Wilding conifer management in the Waihaha Scenic Reserve. Except for some trees on cliffs remaining, all live Douglas fir in this photo have now been controlled. *Photo: Nicki Hughes. February 2023*



Wilding Conifers controlled on Kaiapō Headland, Taupō Northern Bays looking south towards Tongariro National Park. *Photo: Nicki Hughes. May 2023*

This has made a considerable difference to reducing the scale of the wilding conifer infestations in these areas, meaning that natural regeneration will be able to proceed. Regeneration within these reserves is commonly dominated by dense five finger and



other palatable species. This is a direct consequence of sustained animal pest control since the mid 1970's and this forest vegetation cover is crucial for maintaining healthy water with Taupō moana — the primary reason the Lake Taupō reserves were protected. The recent eradication of bovine TB by Ospri TB free in 2017 and cessation of wide-spread possum control is of equal concern. Without this pest control restarting, less benefit will accrue from the eradication of wilding conifers. Whilst this project has been focused on controlling wilding conifers we advocate for state funded animal pest control to restart. Without this there are real and immediate risks posed to these reserves, such as widespread collapse of five finger forest canopies.

This work has also helped preserve sites of important cultural heritage within these reserves, including waahi tapu sites. The scenic values of these Outstanding Natural Landscapes will also improve in the next 10 years as trees break down. Follow-up treatment will be required to maintain these gains. Follow up works are required on Tauhara Maunga, on cliffs in the Northern and Western Taupō Bays, and to re-work the Douglas fir stand in the Waihaha Block. The estimated cost to complete the

Representatives of Project Tongariro, Mana Whenua and Singers Ecological examining the progress of the stage one Rangatira Point Wilding Conifer control, and planning for the next stage of the project, November 2021 hui. *Photo: Nicolas Singers*

next stage in the Northern and Western Taupō Bays is approximately \$80,000; and at Tauhara Maunga is approximately \$40,000 with additional funding required for any abseil control and at Waihaha in the next 10 years.

VOLCANO WATCH 2023



HARRY KEYS

EX CONSERVANCY SCIENTIST
PROJECT TONGARIRO
MEMBER

Ruapehu activity

The level of volcanic unrest at Ruapehu in 2022 as reported in last year's journal was unusual. There were concerns about the potential for a seal to develop in the vents beneath the lake and potential buildup of gas pressure. After a long and strong period of volcanic tremor early in the year, the normal temperature rise did not occur until March and as noted peaked at 41°C on 8 May 2022. Before then in April, GNS had detected the 2nd highest ever recorded value of carbon dioxide gas output through the crater lake. The lake temperature declined to 21.5°C by 18 June but the Volcanic Alert Level was held at 2 until 4 July because of the uncertainty reported. The next heating cycle started in mid-August and peaked at 35°C on 26 December 2022. The Alert Level was held at 1 because monitoring indicators remained within normal range for this type of activity.

Thereafter the lake temperature cooled to a 30 year minimum of 11°C by 18 July 2023 (Figure 1). This again raised the concerns about a seal under the vent. The

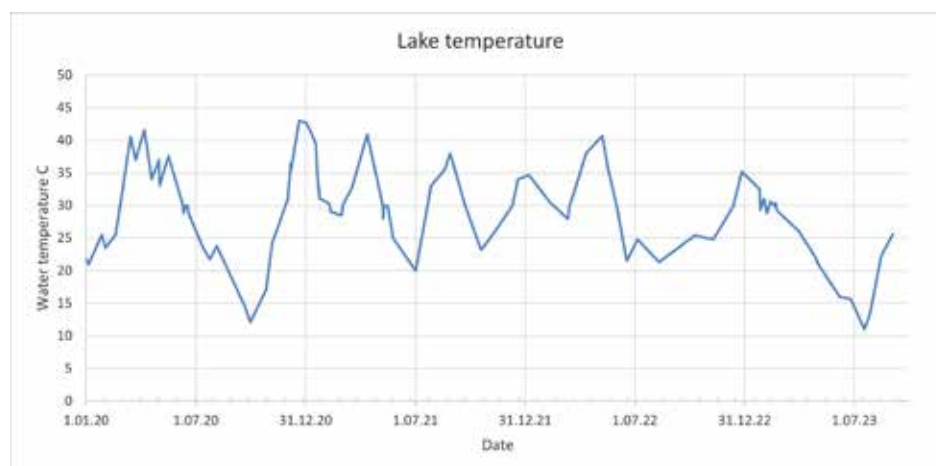


Figure 1. The temperature of Te Wai ā-moe (Crater Lake) from December 2022 to end of July 2023 (GNS).

level of volcanic tremor recorded by GEONET's seismic equipment remained weak and very few earthquakes were being located beneath the volcano. Most importantly the new gas scanning equipment (see below) measured low-to-moderate levels of gas output most days during the preceding three months indicating volcanic gases were still flowing through the volcano (VOLCANIC ACTIVITY BULLETIN RUA - 2023/03 Monday July 31 2023 4:00 PM).

Water samples collected from the lake showed no significant changes compared to other recent chemistry samples. The water and gas composition data were consistent with chemical interactions between the fluids and gases, and volcanic rocks in the hydrothermal system beneath the lake at low levels of volcanic activity. As a result, the Volcanic Alert Level remained at Level 1. But it was pointed out that Mt Ruapehu is an active volcano and has the potential to erupt with little or no warning when in a state of minor volcanic unrest.

GNS had recently deployed three sensors around Ruapehu volcano with support from the Department of Conservation, Ruapehu Alpine Lifts and local Iwi. The sensor technology is based on differential optical absorption spectrometry (DOAS, see [Our scanDOAS gas scanning equipment](#)). The three sensors are based at Iwikau Village, Tūroa Ski Area and Tukino Skifield. The ScanDOAS sensors measure the absorption of the ultraviolet light from the sun by monitoring the SO₂ gas present in the volcanic plume (normally not visible to the naked eye). To operate effectively the volcanic plume must pass over the sensor and the sky needs to be clear. The three sensors on Ruapehu cover as much of the downwind areas as possible. These sensors have been invaluable to the monitoring efforts at other active volcanoes since 2012 and are a major advancement in monitoring Ruapehu Volcano.

The lake temperature started warming again after 18 July (Figure 1) and reached a peak of 26.2 on 5 September. The Alert level remained at 1.

Growth of melt water lakes

Catastrophic (sudden) drainage of ice and rock dammed lakes in mountain regions is a worldwide hazard with floods that can result in mass fatalities. Tongariro National Park has experienced three such events in the last 70 years as a result of dam failure following eruptions of Ruapehu and Te Maari with risk management successfully preventing fatalities in the most recent two events. The lake formed after the Te Maari eruption on 6 August 2012 was about 30,000 m³ when it burst through the syn-eruption landslide dam on 13 October 2012. The March 2007 lahar from Te Wai-ā-moe/Crater Lake was 1.3 million m³.

As reported in last year's journal melt lakes have been developing annually in summer on the Summit Plateau of Ruapehu. Last year the largest, in the north end of

the summit plateau, exceeded the volume of the Te Maari lake. Failure of the northeast rim of North Crater has the potential to create a hazardous lahar down the mountain along the Round The Mountain Track in the Mangatoetoenui Valley. Although at present these melt lakes are small enough to drain harmlessly by unconfirmed subglacial routes, they may potentially grow much larger as they continue to replace the glacier ice present in at least two craters. So subglacial ice dam failure breakout could eventually also pose a lahar hazard in the Whangaehu Valley. In 1985 the maximum thicknesses (depth) of ice in the two craters were 130 m in the east side of North Crater and 60-100 m in Central Crater (Otway 1988, Holdsworth 1989). These lakes will continue to be monitored in conjunction with Dr Shaun Eaves of Victoria University Wellington, as funding allows.



Figure 2. Hazel Phillips investigates the area beside the northeast rim of Ruapehu's summit plateau on 18 April 2023 where the meltwater lake had drained some weeks before. It was smaller than the 2022 lake in this location. Hydrogen sulphide gas could again be smelt along the radiation crevasse (randkluft) shown. *Photo: Harry Keys*

PROJECT TONGARIRO CONTACT DETAILS



POSTAL ADDRESS: PO Box 238,
Turangi, 3353,
New Zealand

PHYSICAL ADDRESS: C/- DOC
3 Turangi Town
Centre
Turangi 3334

PHONE: 07 386 6499

MOBILE: 027 628 8009

EMAIL: info@tongariro.org.nz

WEBSITE: www.tongariro.org.nz

FACEBOOK: www.facebook.com/projecttongariro



EMAIL: info@greeningtaupo.org.nz

WEBSITE: www.greeningtaupo.org.nz

FACEBOOK: www.facebook.com/GreeningTaupo

MOBILE: 027 628 8008

ADDRESS: c/- DOC, PO Box 528, Taupō 3351



EMAIL: info@greeningtaupo.org.nz

WEBSITE: www.predatorfreetaupo.org.nz

FACEBOOK: www.facebook.com/Predator-Free-Taupo

MOBILE: 027 628 8008

ADDRESS: c/- DOC, PO Box 528, Taupō 3351



EMAIL: rachel@greeningtaupo.org.nz

WEBSITE: www.kidsgreeningtaupo.org.nz

MOBILE: 027 412 7145

ADDRESS: C/- DOC, PO Box 528, Taupō 3351



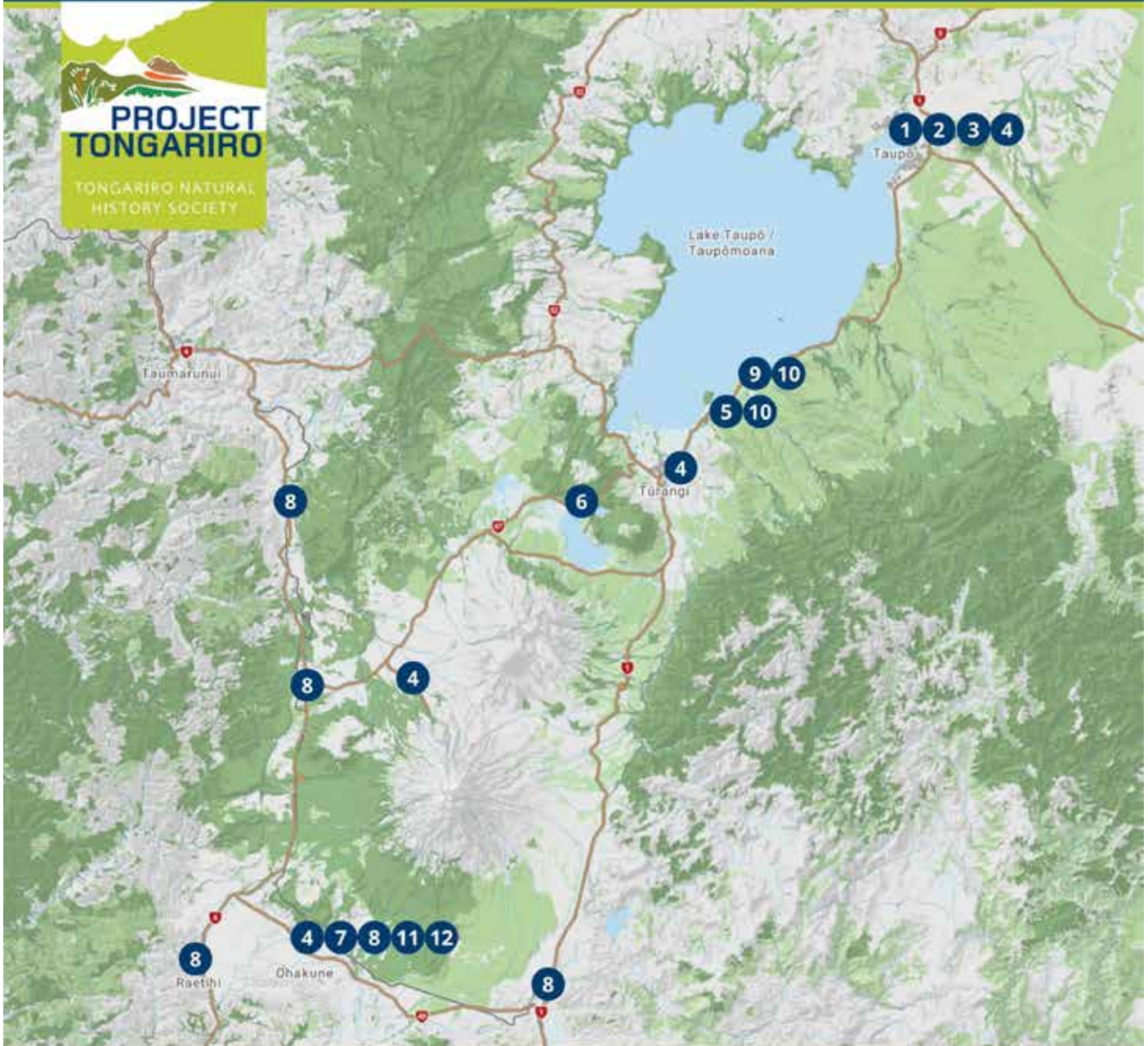
COORDINATOR: Clodagh Costello

EMAIL: clodagh@tongariro.org.nz

MOBILE: 027 226 2838

ADDRESS: PO Box 238, Turangi 3353

Current Projects & Activities 2023



1. Greening Taupō
2. Kids Greening Taupō
3. Predator Free Taupō
4. Mahi Aroha Summer Programme
5. Te Mātāpuna Wetland Restoration
6. Mt Pihanga - Lake Rotopounamu Forest Restoration
7. Rongokaupo Wetland Restoration
8. Waimarino Restoration
9. Oruatua Recreational Reserve Restoration
10. Predator Trapping
11. Kiwi Forever Programme
12. Predator Free Ohakune



